



NEW WORLD HORIZONS

Geography for the Air Age

Edited by CHESTER H. LAWRENCE







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Edited by
Chester H. Lawrence
Maps by Ray Ramsey

DUELL, SLOAN AND PEARCE

NEW YORK

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Foreword

Most Americans, accustomed to thinking of geography as an elementary school subject, have been rather forcefully awakened to their deficiency in this field of knowledge in the months since America entered the war. Construction workers engaged in building air and naval bases on strange and distant islands, members of the armed forces serving on all the continents, and the ordinary layman, struggling to understand the multiple problems of a global war, have all become suddenly aware of the little-known lands and people beyond our shores, and their importance to our future security and well-being.

Mandalay, Java, Egypt, Archangel, Hawaii, and countless other names have been stripped of their veils of romance and glamor, and stand revealed as geographical realities possessing vital and strategic importance. Screaming newspaper headlines and verbose radio commentators have made the man in the street aware of the existence of these major centers of world conflict, but for the most part, he remains in ignorance as to the factors which form the background for such problem areas. A knowledge of the people, climate, topography, natural resources, and agricultural potentialities of the territory of our allies as well as of our enemies is essential, however, if we are to carry on a total war with complete success.

This fact is recognized by military leaders, who credit much of the Nazis' success to the synchronization of military strategy with a thorough understanding of physical and social conditions in the country under attack. The American public has read, somewhat superficially, of Professor Haushofer and his geo-political institute at Munich, where much of the Nazi military and political strategy supposedly originates. They are less aware of the fact that our own government also recognizes the value of geographical knowledge. A recent census lists almost two hundred highly trained geographers who are employed in various governmental departments at Washington, and as many more are adding their knowledge to the war effort in other parts of the country, and in the field with the armed forces. The demand for such trained scientists is still only partly met.

Professional geographic training has made great strides in America since World War I, when the subject was included in the curriculum of only a few colleges and universities. Led by a handful of resolute and far-sighted leaders, the geographic profession has gained supporters, and has, after years of struggle for recognition, won the respect of scientists, scholars, business men, and government administrators. The present conflict, embracing all

continents and oceans, and extending over many and varied natural regions, demands specialized geographical training, and is, for American geographers, a challenge and an opportunity for service. Though their numbers are relatively small, they are already playing an important part in the war effort and will, without doubt, be of invaluable help when the time comes to tackle the perplexing problems of peace and reconstruction.

The layman, poring over his atlas, and virtually breathless in the race to keep pace with day to day events, will get scant comfort from the knowledge that skilled geographers are part of our war machine. He is more concerned with his own immediate problem of unscrambling the headlines, and attempting to clarify, in his own mind, the strategical problems of the several theaters of war, armed only with the scattered remnants of his grade-school geographic training. In "New World Horizons" he will find the answers to many of his questions, presented in simple, concise language, and graphically depicted on gay and attractive maps. For it is as a layman that Mr. Lawrence ventured into the field of geography, at first with the intention of enlarging his own geographic background. In the course of acquiring such information from a variety of sources, he visualized a book, designed for the millions of Americans whose formal geographic training terminated in the fifth or sixth grade, which would be a summarization and digest of the best modern geographical works.

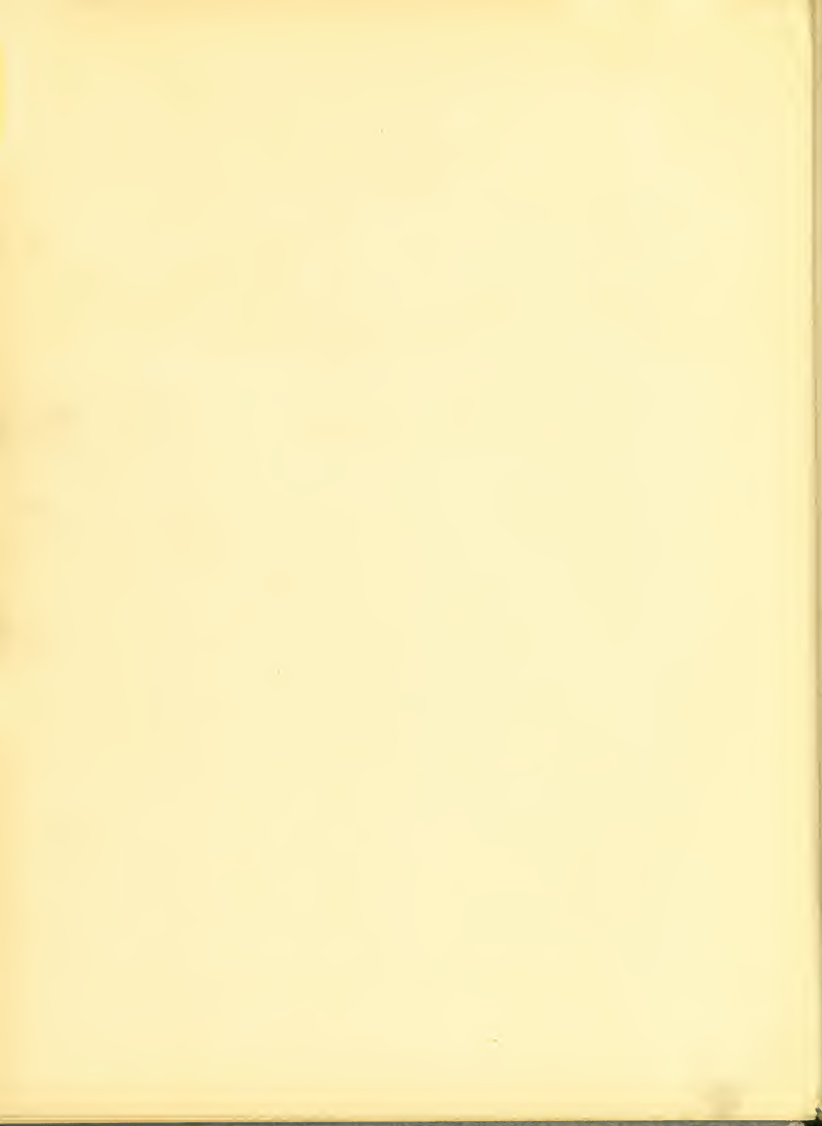
"New World Horizons" is in effect then, a *geography for the millions*, and in it Mr. Lawrence has produced a book which will fill a real demand for such information. Maps, those indispensable and valuable tools of the geographer, are skillfully and artistically used to illustrate and clarify many problems. A number of original and unique cartographic ideas are interesting and thought-provoking, and provide a welcome departure from conventional map-making.

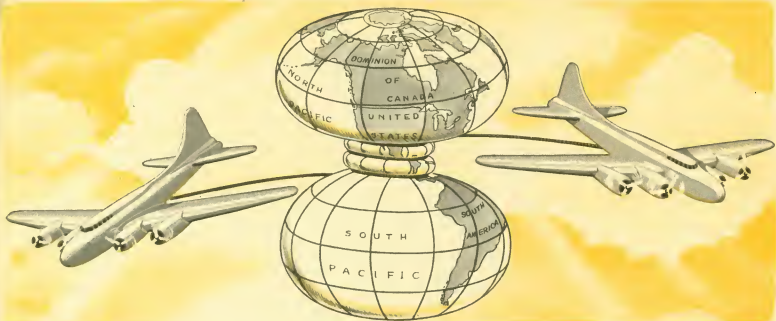
Wisely, the editor has made no attempt to formulate a post-war program, nor to present geography as the cure-all for the world's problems. For as Spykman has observed, "a simple geographic solution of the problem of world peace is no more likely than a simple legal solution." But a widespread knowledge of world geography will help toward a better understanding of those problems, and form the basis for intelligent study of existing conditions, leading toward their eventual correction. "New World Horizons" is one attempt to disseminate such geographical knowledge.

—WALTER W. RISTOW, Ph.D.,
Chief of Map Division,
New York Public Library

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New World Horizons

Geography for the Air Age

ALMOST OVERNIGHT the world changed and a new age was upon us. America discovered a new world. Men clipped to Europe and to the Orient in a few days. When war broke out, distant points were attacked without warning by airplanes. Unheard-of seas and tiny islands appeared in the news. Americans found their familiar conception of the world inadequate. Their geography was of the age of the ox-cart and the sailing ship.

Everyone knew the world had shrunk in terms of travel, transportation, and communication. But the last stages had come so swiftly that laymen—and many so-called authorities who should have known better—were caught unawares. We did not realize how far we had advanced and what the modern world was like.

The modern era of technical progress may be divided into three periods. The first period, that of the fast stagecoach and the sailing vessel, lasted from about the time of William the Conqueror to the latter part of the eighteenth century. In the middle period, which covered the next hundred years or so, the major developments were the steamship and the locomotive. World spaces began to diminish at an increasingly rapid pace. Then, in the latter years of the nineteenth century, a new cycle began, and the size of the world was reduced in spectacular fashion. Radio, the auto-

mobile, the streamlined train, and the airplane were the great space reducers of this new age.

There are several reasons why Americans lagged behind the citizens of many other nations in knowledge of geography.

The United States is divided by two immense bodies of water from other world powers. It is dominant on its continent and it has had no quarrels with neighbors which would have served to keep boundaries in the public mind. Moreover, the vast majority of citizens have been content with the territory already possessed by the United States—in fact, there has always been strong opposition to acquiring possessions distant from United States shores, and a few years ago Congress voted independence to the Philippines. Children do not range their eyes over the maps of the world to locate with pride their domains, as do the children of Great Britain. No American pounds his chest and demands colonies, as does Mussolini of Italy. American youth are not taught to view the world as a cheese they will some day cut up, as were Germans under the Kaiser and again under Hitler. American armies do not attack neighbors, as do those of Japan.

Nor has there been need to worry greatly about raw products for the machine civilization. Who cared about the oil production of Iran and Iraq when the



Maps can be deceiving and should be used only for the purpose for which they were designed. The map of North America to the left is from a Mercator projection which has been used by sailors for centuries. That to the right is a more recent equal-area projection. Note the difference as one is superimposed upon the other.

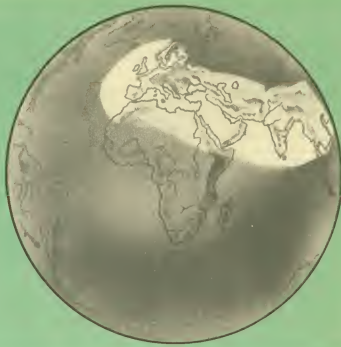
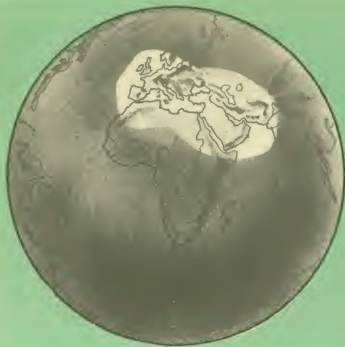
Maps Can Lie

ANOTHER FACTOR which contributed to America's lack of geographical knowledge was that the maps in general use did not reveal the nature and the problems of our changing world. Many maps were not only inadequate but helped to distort facts and to deceive. It was not realized that a map must of necessity be a living and changing thing, any more than it was realized that geography was a dynamic and essential branch of modern knowledge. It is easy to trace the steps which led up to the paradoxical situation that, in a country which had made more rapid advances in technics than any other nation in the world, there was such widespread neglect of a vital science that was constantly widening its scope and importance.

Our earth is roughly a sphere, and therefore the only true method of representing it is on a globe. Every student of geography and world problems should be familiar with globes, today more than ever before, when events assume global proportions. But

flow of black gold from our own wells had to be curbed because of overproduction? Why should Americans concern themselves with the wheat yield of the Ukraine when our government was asking the farmers to cut their acreage? There was no reason to go about the world looking for iron and coal; we had more than enough for our needs.

In short, to Americans geography was until recently a dry study of the familiar book—the names of so many capitals and of so many rivers and mountain ranges to be remembered, until, at last, a passing mark was granted by the teacher.



The Known World at three periods in history. At left, 300 B.C. Right, 300 A.D. Below, 1500 A.D.

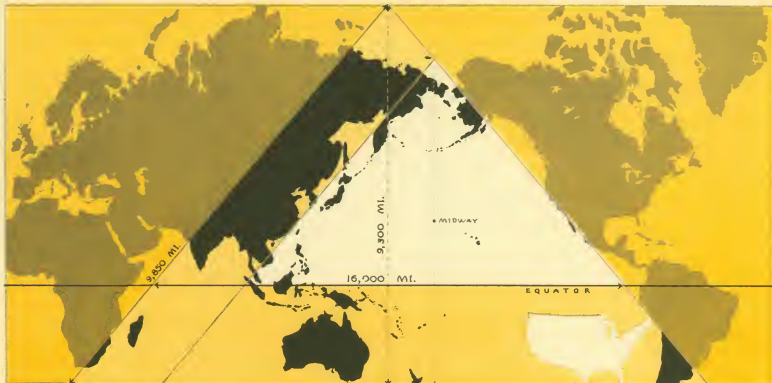
the globe, while indispensable for enabling us to grasp major world problems, is of little use in studying more detailed areas. This is where maps are necessary, and there are many varieties of these interesting tools of the geographer, all designed for specific purposes, all possessing advantages and limitations, all extremely useful when studied intelligently.

No map can tell the whole truth, and the flat map has been one of the most peculiar and subtle purveyors of half-truths since the days of the Phoenicians. Depth, dimension, curves, began to be added to maps when Columbus reached the shores of the New World in 1492. His crossing of the Atlantic made useless all maps then existing. As the explorers and navigators discovered new seas and new lands the map-makers kept pace. When the concept of the world as a globe gained acceptance, an effort was made to make flat maps of the entire world. From the point of view of providing a chart for sailing routes, and for showing winds and currents, one of the early map-makers was highly successful and the map which came into common use is still used in navigation and is still known by his name as the Mercator projection. This projection assumes the earth to be a cylinder, the sides of which are spread out to form a flat map. Meridians, instead of meeting at the North and South Poles, are spread apart and form right angles with the parallels. Only at the equator are distances correct. Toward the



poles, land and water areas are greatly exaggerated. Continental shapes are, however, fairly accurate and directions on the map conform to the four sides of the paper: that is, north at the top, east to the right, and so on. The Mercator projection is standard to this day, but, unless its limitations are recognized, it is very apt to give the layman a confused and wrong image of the world.

Many other projections have been developed for world maps, most familiar of which are the two-hemisphere type and the oval projection. In recent years interrupted projections have been introduced. Although of the "equal area" type, and much more



Using a Mercator projection, with Wrangle Island as the apex and the equator as the base, the North Pacific Ocean forms a giant triangle (as shown in the white area). If the lines of that triangle are extended to include Australia and the Indian Ocean, then the vastness of this larger triangle, in relation to the United States, becomes apparent. The combined Pacific and Indian Oceans cover two-thirds of the surface of the world. It is on this immense battlefield that the strategies of the nations at war are being planned and executed.

Knots Versus Miles

The mariner and the landsman speak different languages. They measure and think of time, distance, and speed in different terms. The nautical mile used by the mariner to compute distance is not the same as the statute mile; for example, 1,000 nautical miles equal 1,150 statute miles. Knots, measured as minutes or divisions of a map, by the mariner, must be translated into miles per hour to have meaning for the landsman; thus, 15 knots per hour, as the sailor reckons, becomes about 17¼ miles per hour in terms of land travel, while 50 miles per hour on land is approximately 43¾ knots per hour at sea.

accurate areally than Mercator's, they have not caught the popular fancy. For picturing individual continents, or smaller areas, some form of the conical projection is most frequently used. This projection minimizes distance and shape distortion, for, as on the globe, the meridians converge at the North and South Poles. In using a map on a conical projection, one should remember that true directions are determined by the meridians and parallels, and not by the top or sides of the map.

The airplane is not restricted to established land or water routes, and can follow the most direct and shortest course. In laying out air-line routes the limitations of the Mercator projection are most apparent. Who, after studying a Mercator map of the world, would guess that the shortest air route from Chicago to

Berlin is northeast, across eastern Canada, southern Greenland, Iceland, and the Scandinavian Peninsula? Or that the most direct and shortest air trip from San Francisco to Tokyo would pass near the Aleutian Islands?

With the major land-masses of the world grouped around the North Pole, the Arctic region is becoming increasingly important as an aerial highway and new maps are needed. The Azimuthal projection is best suited for such maps, and some modern cartographers have adopted it to show these new continental relationships. This projection is circular in shape, with the meridians spreading outward from the North Pole. Distortions of shape and size increase toward the rim of the circle, and are especially pronounced beyond the equator.



Canada Steamship Lines, Ltd.

Water routes have provided the most economical means of transport for some goods and raw materials, particularly those which must be shipped great distances in volume, such as oil, cotton, ores and lumber.

On such a map, the land-masses can be seen to radiate out from the North Pole like the spokes of a wheel. Alaska and, particularly, the Aleutian peninsula stand out as areas of incalculable strategic value to the United States and, indeed, the whole of North America. Russia, China, Great Britain, the Scandinavian Peninsula come close to being bordering countries and certainly provide zones of special importance to America in the practical development of air communications, transport, and trade.

Moreover, from this bird's-eye view—which, due to the airplane, is now the correct one—it is clear that in this group around the North Pole are most of the civilized nations of the world, as well as large island possessions of the United Nations. They form an almost continuous land-mass, and the seas about them are controlled by the United Nations. Germany, Japan, and Italy, on the other hand, are far removed and must carry out their schemes in distant circles of the world.

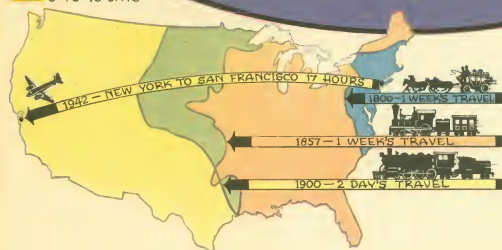
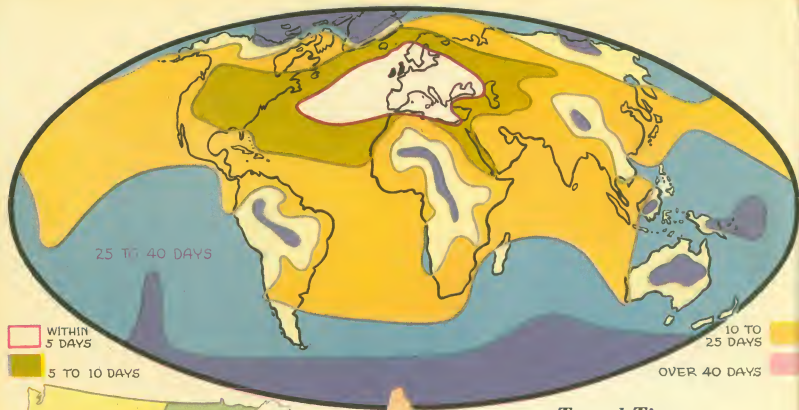
This is but one example of the many applications of new-dimensional map-making required by aeronautics and the high-speed engine, by scientific and inventive progress.

Some of the most decisive battles of this war are being fought at sea, in the struggle to control the vital ocean highways. Conventional map projections do not give a clear picture of these theatres of action. The

orthographic projection, which resembles half a globe, emphasizes the spherical form of the world, and portrays quite adequately the problems of the ocean basins and the strategic nature of their island groups and bordering land-masses.

Compressing the Globe

Jules Verne's hero set an imaginary world record in 1872 when he travelled "Around the World in Eighty Days." This breathless exploit was supposedly accomplished in about one-thirteenth the time required by Magellan's expedition to sail around the world in 1522. Magellan spent almost three years, or 1,083 days, on his globe-girdling voyage. In 1929 a German airship went around the world in 20 days and 4 hours, one-fourth of the time taken by Verne's hero. In 1938 Howard Hughes flew a 14,824-mile course around the world in less than 92 hours, one-fifth of the German airship's time. In 1942 a bomber, flying at 330 miles per hour, can make the trip in about 45 flying hours. Thus, Magellan's world was 518 times larger than the world of today, Jules Verne's world was 38 times larger, and even the world of Howard Hughes in 1938 was twice as large.



Travel-Time

This is world travel-time in the early 1900's, just before the development of the airplane. One by one, the locomotive, the steamship, the automobile, and the flying machine have added to the potential of the time-mile. How long is a mile? To a man on foot it is the distance he will cover in about twenty minutes. In an airplane, moving at 180 miles an hour, it is the distance covered in twenty seconds. The walking mile is sixty times as long as the airplane mile.

The New Geography

THE CUSTOMARY METHOD of teaching geography in United States schools was unsatisfactory for another reason. Place geography, not real geography, was taught. The student learned a country's location. He knew the name of its capital, of its principal rivers, and of the nations and waters which bounded it. He perhaps knew by rote its principal products. But he may never have learned why it lagged behind or forged ahead of its neighbors. He gladly accepted the thesis that the United States was the richest country on earth, but he may not have known why. He could understand wars in Europe and follow their moves east and west on the continent. But it was much, very much, harder for him to grasp the importance of

events in the Far East or the Far North, the South Pacific, and the North Atlantic. Places like Madagascar, Singapore, the Gilbert Islands, Greenland, and the Sahara Desert did not seem to him to have any relation to the American scheme of things. Nor was he concerned with the problems of world trade or the fortunes of people living in Africa, Ceylon, Chile, and the South China coast.

The importance of geography, however, was to be seen everywhere. Towns mushroomed where oil was discovered; they disappeared if the oil ceased to flow. Many a town died because the railroad passed it by. In horse and buggy days the village flourished in the United States, but with the advent of the automobile



Speed Shrinks the World

Above. The world we have known at ship's speed of 12 miles per hour would look like this.

Right. Increase that speed to 40 miles per hour and the world is reduced in this way. Picture, if you can, a map which compresses the world to one-eighth the size shown here and you get some idea of what air speed does to distance. Modern airplanes can cross the oceans in one twenty-fifth of the time required by ships.

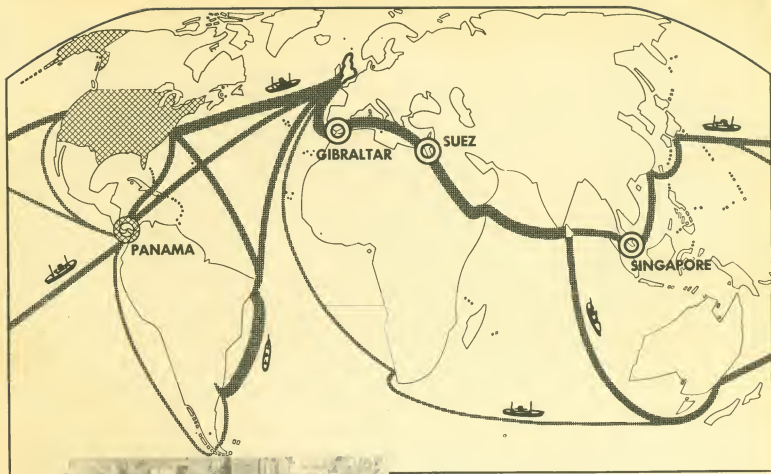
The world changes its aspect as well as its shape as the miles per hour increase and the horizons are extended from on high. Man in his role of Superman seems unreal and impossible until it is realized that his modern achievements are entirely real. Flight is the most meaningful symbol of the world today, whether of its desirable future or of its terrifying, destructive present.



and hard roads, local stores went out of business because farmers and even townspeople drove to nearby cities to patronize stores able to carry larger stocks. Business men of once-prosperous communities poured money into various schemes calculated to bring back the good old days, never realizing that changes in transportation methods or some other factor had made the realization of their dream impossible. Sometimes a new development affected a far-distant region. For example, discovery that physical and economic conditions in Malaya and the Dutch East Indies were better suited to rubber production than those of Brazil very nearly destroyed the rubber industry in the latter country.

The natural resources of a nation are responsible perhaps even more than its people in shaping its

course. Russia fought many wars for a port which would be ice-free the year round. Great Britain did not lead the industrial revolution merely because Englishmen thought of it first. It had a wealth of coal and iron, without which heavy industry is impossible. But for lack of room to grow food, productive land throughout the world was sought. In turn, the establishment and maintenance of an empire would have been impossible had not Great Britain had good ports. The growth of France, Germany, and other nations of Northern Europe was due in large measure to the deeply indented coastline, which provided good ports and because of extensive mineral resources. The nations of Southern Europe, on the other hand, de-



War Department Orientation Course

Strategic Points

Across the world there are a few strategic points which control the flow of goods between nations. Only a free exchange of resources can make possible the right standard of living in the world.



Pan American Airways System

clined because of lesser transportation facilities and scantier deposits of minerals. The whole history of the world was undoubtedly affected by the drying up of the waters of Central Asia many ages ago, which forced the Mongolian hordes out into China, India, and Europe.

Access to the sea, mineral resources, fertile land are important. Not less so is weather—and the sum total of weather is climate. Man has made the greatest progress in temperate regions of the Northern Hemi-

sphere. It is cool enough to stimulate and to permit hard and extended toil—and the fact that intensive labor is necessary to gain the comforts of life is not unimportant. In hot lands shelter is often unnecessary, food is easy to obtain, and clothing is no problem. Such conditions breed indolence. Extreme cold, on the other hand, makes life difficult. The mere process of keeping alive frequently absorbs all man's energy.

A glance at the development of the continents of North and South America helps to make geography clear. North America, and particularly the United States, has about all the natural advantages that could be hoped for. It has good harbors on three sides, and numerous inland waterways are navigable. There are vast reaches of fertile land; even subtropical crops are produced. It has great deposits of coal and iron. Nations fight for oil fields; the United States has had petroleum to squander. The climate is favorable to man.



British official photographs

The machines of modern civilization can provide the most destructive machines of war ever known. Man's fate and fortunes depend in large part upon his ability to master the tremendous machine forces which modern technics have placed at his disposal.



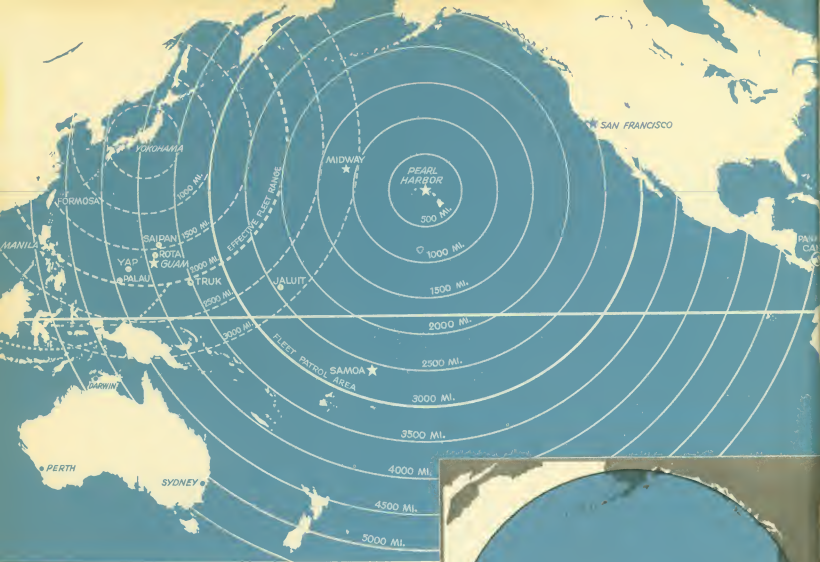
South America, as a whole, while being a rich continent, is less fortunate. High ranges of mountains prevent easy transportation within the continent itself. Some of the farmland ranks with the best in the world, but on the whole the population must scratch hard for a living. Petroleum riches exist, but there is a lack of iron and coal. The climate in many regions is not conducive to sustained effort. It is thus no wonder that North America has developed more rapidly.

Man has, of course, found ways to overcome some geographical handicaps and to improve here and there upon nature. He cut through land in Suez and Panama to join the oceans. He built wells and reservoirs in India, Africa, and elsewhere to irrigate the land. His pipelines carry oil from the interior of Iran to the shores of the Mediterranean. He builds snug homes in cold countries and finds efficient means of heating them. In the tropics he constructs air-conditioned buildings.

In these ways he expands the portions of the world in which he can live. Then he draws the parts together by rapid communications and efficient transportation.

How the Atlantic Has Diminished In One Hundred Years

Columbus made his epochal first voyage across the Atlantic in twenty days. Since then, the records for speed in crossing have been many, each a marvel of achievement for a short while. In 1846, a clipper ship sailed from New York to Liverpool in the record-making time of 13 days, reaching at one point a sailing speed of 21 knots, or between 24 and 25 miles per hour. In 1937 and 1938, two luxury liners, the "Queen Mary" and the "Normandie" competed with each other, with the former establishing a crossing record of 3 days, 20 hours, and 42 minutes at a speed averaging 36 miles per hour over a 2,940-mile course. In 1919 John Alcock and A. W. Brown flew non-stop from Newfoundland to Ireland, 1,960 miles, in 16 hours and 12 minutes. Lindbergh flew from New York to Paris in 33½ hours, a distance of 3,600 miles, in 1927. In 1942 a United States bomber flew from Newfoundland to England, 2,200 miles, in 6 hours and 40 minutes, at a speed of 4½ miles per minute.

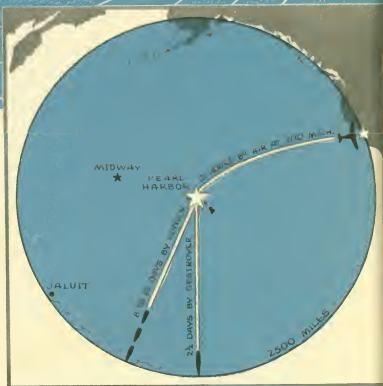


Speed and Space

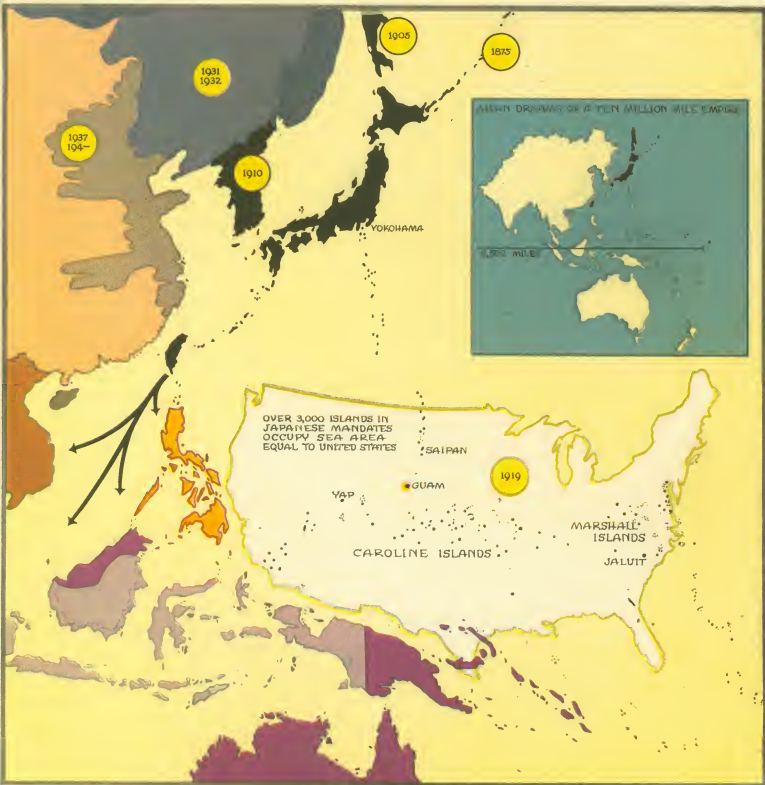
The area of an ocean, a continent, or a country is as great as the time required to cross it. Distance is measured in terms of speed and space. Not how far, but how fast! Thousands of farflung island sentinels, with many more thousands of miles of shoreline, studding millions of square miles of ocean—that is the Pacific battlefield.

He can speak to nearly any part of the world in a few minutes by telephone. He can send and receive messages by cable, or listen by radio to the voice of a man across the earth. And he can step into an airplane and fly to the other side of the globe in the time it required, a hundred years ago, to travel from Chicago to New York.

But though man has been victorious in his wrestle with nature, the social, economic, and political problems of the world are far from being solved. The knowledge of land and sea, of resources, and of men which geography can provide is more and more indispensable in facing these problems. A future in which



man organizes the world for enduring usefulness is one in which world-knowledge will have to be put to work. Boundary difficulties, population problems, and all the rest call for the approach of the scientist rather than for the schemes of the politician and militarist, for if man's machines and technical knowledge are abused then man will no longer find them his implements. They will be his masters instead.



Japan's Dream of Empire

Japan's grandiose schemes of conquest had a modest origin. In 1875 Japan annexed nearby groups of islands; twenty years later Formosa and Port Arthur were acquired, and Sakhalin Island. Then Japan took Korea. In 1931 World War II opened with Japan's seizure of Manchuria.

It is not an accident that the nations who wished to reshape the world in their power patterns have been the leaders in the development of the science of geography. Great Britain, France, and the United States

were satisfied with the world as it stood. The Axis Powers wanted to change it. Consequently they gave close attention to a science that might be of assistance to them.



United Air Lines

Geo-Politics

GEO-POLITICS is a term coined by scholars who thought of geography in political terms. It is a modern name for an old subject. Nations have always thought of geography in relation to politics; or, vice versa, of international politics in relation to geography. When the nations of the ancient world fought for control of the Mediterranean Sea, that was politics flowing from their position on that body of water. In proclaiming the Monroe Doctrine, the United States declared that it wanted no foreign power to interfere in the affairs of the Americas—thus setting aside a geographical division from which outsiders were barred politically and otherwise. That was geo-politics. In fact, it has been said that from the enunciation of the Monroe Doctrine to World War I, the United States employed the principles of geo-politics.

But geo-politics as a way of thinking has been most highly developed in Germany in recent years. Adolf Hitler set it up as a special "science" of his own. Credit for originating the theory of geo-politics is usually given to Friedrich Ratzel, who occupied the chair in geography at the University of Munich. Ratzel died in 1904. "Every people must be led from smaller to larger space conceptions," he wrote. "The decay of every state is the result of a declining space conception." He considered the division of land and sea power of vital importance, and that the nation which had the best division of power would naturally be paramount. Living before the development of the airplane, he placed great emphasis on sea power. Germans grew up to think in terms of a larger space. The Kaiser spoke of German domination of Middle Europe. Ratzel used the term *Lebensraum*, which Hitler employs so misleadingly.

An Englishman, Sir Halford Mackinder, made important additions to the theory of geo-politics which

were taken to heart in Germany but did not gain much attention in Great Britain. Mackinder placed Asia, Europe, and Africa in a single unit which he called World-Island. The other continents he regarded as merely satellites. Central Eurasia he called Heartland. He wrote: "Who rules East Europe commands the Heartland; who rules the Heartland commands the World-Island; who rules the World-Island rules the world." He saw world history made "by the pressure of land-locked peoples of the plains of East Europe and Western and Central Asia upon those on the outside settled along the coasts."

Karl Haushofer is the geo-politician who has most affected the history of modern times. From him Hitler got his ideas of geo-politics. Rudolf Hess, Hitler's deputy, had been on Haushofer's staff during World War I, and had attended the geographer's classes when, after the war, Haushofer became a professor at the University of Munich. Hess imparted some of Haushofer's ideas to Hitler and later brought the aspiring dictator to visit him.

"Do not be small-minded, but think in broad terms of large spaces, in continents and oceans, and thereby follow the course laid down by the *Fuehrer*," Haushofer advised the Germans. He had studied Japan's aggressive moves against its neighbors in Asia, and he approved. Japan, he declared, should be the ally of the Nazis. But on one major point he did not agree with Hitler. Haushofer, like Bismarck and like Mackinder, believed that friendship with Russia was essential to Germany's welfare. "It is a vital necessity that Germany and Russia unite their strength," he wrote.

Haushofer's grand strategy of developing a giant pincers movement with the aim of outflanking the oceans has been followed by the Germans. Through the control of land spaces and ports the Nazis hope,

with the aid of the airplane, to strangle sea power.

The Axis Powers, whose leaders thought in terms of geo-politics, launched their world offensive while the democratic nations looked on. England stood idle when Italy conquered Ethiopia. All the democratic nations kept hands off while Italy and Germany intervened on the fascist side in Spain. Nothing was done when the Nazis marched into the Rhineland, into Austria, and into Czechoslovakia. The dictators were gaining new regions which they needed to help them gain still others. British and French statesmen thought in old-fashioned political terms. Had they understood Hitler's ideas of geo-politics they could readily have understood that his promises of no more aggression were worthless.

Japan came late into the modern world. But the Japanese learned quickly to imitate more advanced nations, and one of the sciences they mastered was that of geo-politics. Their conceptions of time and space were well advanced, as the people of the United States have learned. It was generally expected that if the Japanese attacked Hawaii they would come with their fleet in full force, sending advance tidings in plenty of time for the forces of the United States to get ready. Apparently few American strategists had really believed that an effective attack by airplane was possible. The Japanese showed a more realistic understanding of the new elements of time and space.

The British had had as much opportunity as anyone else to learn about airpower. But they did not grasp its importance fully until two of their greatest warships, steaming as unprotected from air attack as in the days of Lord Nelson, were sent to the bottom of the sea.

Just as the democratic nations never would have permitted Germany and Italy to gain footholds for new aggressions had they understood geo-politics, neither would they have permitted Japan to proceed until excellent bases for further conquest were established. Strings of islands in the Pacific—together they number more than three thousand and cover a sea area equal to the land area of the United States—were mandated to Japan after World War I. The Japanese converted some of them into air bases. These turned out to be among their most important war possessions.

Geo-politics has always been important to Japan in its quest for empire. On the day that Japan invaded Manchuria, September 18, 1931, a new era was launched and the Second World War was under way.



Pan American Airways System

The geo-politician thinks in global terms; his is the study and science of the great land-masses and expanses of ocean.

Manchuria was seized largely for its supplies of coal and iron. But these supplies were not great enough. China, with metals and other raw materials, was next on the list. But China did not fall as quickly as the militarists had anticipated. Japan began to look farther afield and its eyes fell on the Dutch East Indies and Indo-China. Here were tin, rubber, iron, zinc, coal, and tungsten—all necessary for fighting a war, and also for peace-time industry. The control of tin and rubber would be of enormous strategic value, for the Dutch East Indies and Indo-China have been the world's chief suppliers of those two commodities.

Japan first tried to gain control of the Indies' trade. Taking a leaf from the German book—a great many were to be taken before it had finished—Japan sent subsidized traders into the region, as had Germany into South America. In 1937 negotiations began with the Netherlands for special trade privileges, but the negotiations dragged on with nothing accomplished. When Hitler invaded the Low Countries in 1940, Japan felt certain of its ground. But threats and demands were unrewarding. A little while later Japan's plan of conquest was further aided by Hitler's invasion of Russia. The threat from Siberia was removed. The only remaining power likely to resist Japanese aggression effectively was the United States, since the British had their hands full in fighting Germany and Italy. By a combination of treachery and careful preparation based on the most modern techniques, Japan succeeded in making a relatively effective surprise attack on the United States fleet. The waters



The Heartland of Geo-Politics

An English geographer was the first to call the center of the Eurasian land-mass a Pivot Area or Heartland. His teachings were adopted by Hitler's geographer, Haushofer. "Who rules the Heartland commands the World-Island; who rules the World-Island commands the world."

of the Western Pacific were mastered, and the available land forces of the Netherlands, the British, and the United States could not match the larger armies which Japan could immediately throw into the struggle.

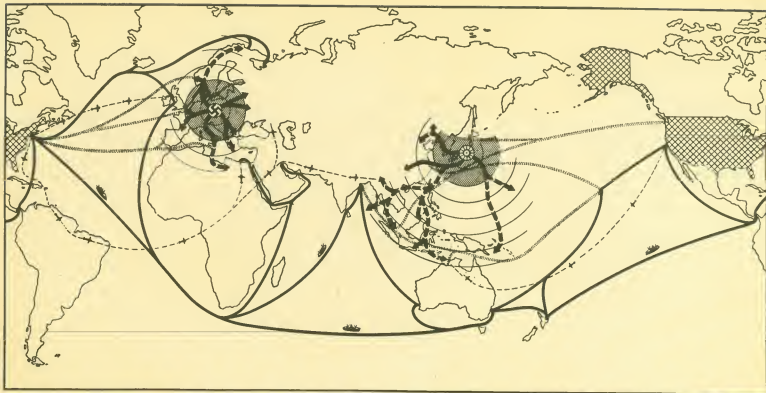
It is Japan's intention to dominate Asia. The desire is a fantasy of ambitious minds, but the arguments came from a pretentious theory of geo-politics developed by Hitler's geo-politicians. The Nazis have allotted for themselves Europe and Africa—until

they get ready to take over the whole world. As long as the United States was neutral, the Nazis said that the Western Hemisphere was to be let alone. Europe was to have its New Order; Asia was to have its New Order; the Western World could have any order it pleased. Some Americans thought the Nazis and the Japanese sincere in this regard. A clearer understanding of geography would have shown them that a democratic United States could not exist in a world under the domination of undemocratic nations.



A Three-Dimensional World

The Great Circles of the Air Age are giant, unobstructed arcs that draw the most remote parts of the earth ever closer. From New York to the Suez Canal is a distance of 14,000 miles by water, and of only half that, or 7,200 miles, by air. Seattle is 14,000 miles from Calcutta by water, but by air Calcutta is 8,300 miles away.



War Department Orientation Course

For many years before they opened the final stage in their drive for world conquest, the Axis powers had made plans and preparations. They had given intensive study to our lines of communication and supply, which they endeavored to cut at the very outset. They destroyed or blocked many of the shortest and most direct routes. By continued penetration and encirclement they aimed to keep the United Nations apart, in order to fight them separately. "Divide and Rule" has been an aim of conquerors in many wars throughout the ages, but the Axis powers have given new meaning to this bit of politico-military wisdom. The World Front shown above gives some idea of Axis plans and of the scope of the problems confronting the leaders of the United Nations. Never before have such gigantic efforts been necessary to establish and hold bases, to maintain supply lines and communications, to transport fighting men and the materials of war.

The United States in World Affairs

ENCIRCLEMENT has always been opposed by the United States. A balance of power in both Europe and Asia has always been sought. Moreover, the danger of a single power dominant on either of those continents has been increased by modern means of warfare. The military threat is greater, for example, from Dakar on the bulge of Africa than from the La Plata region of South America.

If the belief that the Western Hemisphere is safe from military attack is illusionary, so is the theory that it is economically self-sufficient. The United States can come nearer living by itself than any nation other than, perhaps, Russia; but the standard of living would be enormously lowered. Tin and rubber, both so essential to modern life, are lacking.

Many other articles to which Americans have grown accustomed can be secured only from Europe or Asia. The loss of markets would be a devastating blow; and if victorious Axis powers permitted trade, they would insist on spreading ideas and pursuing methods wholly unacceptable to the American mind.

Americans were gradually coming to the conclusion that the United States would of necessity participate in World War II when Japan, Germany, and Italy took the decision out of their hands. But the public was deeply disappointed that, after American youths had gone overseas in 1917 and 1918 to "make the world safe for democracy," war had broken out on an even larger scale in less than a quarter of a century. Consequently, this time the winning of the peace



Pan American Airways System

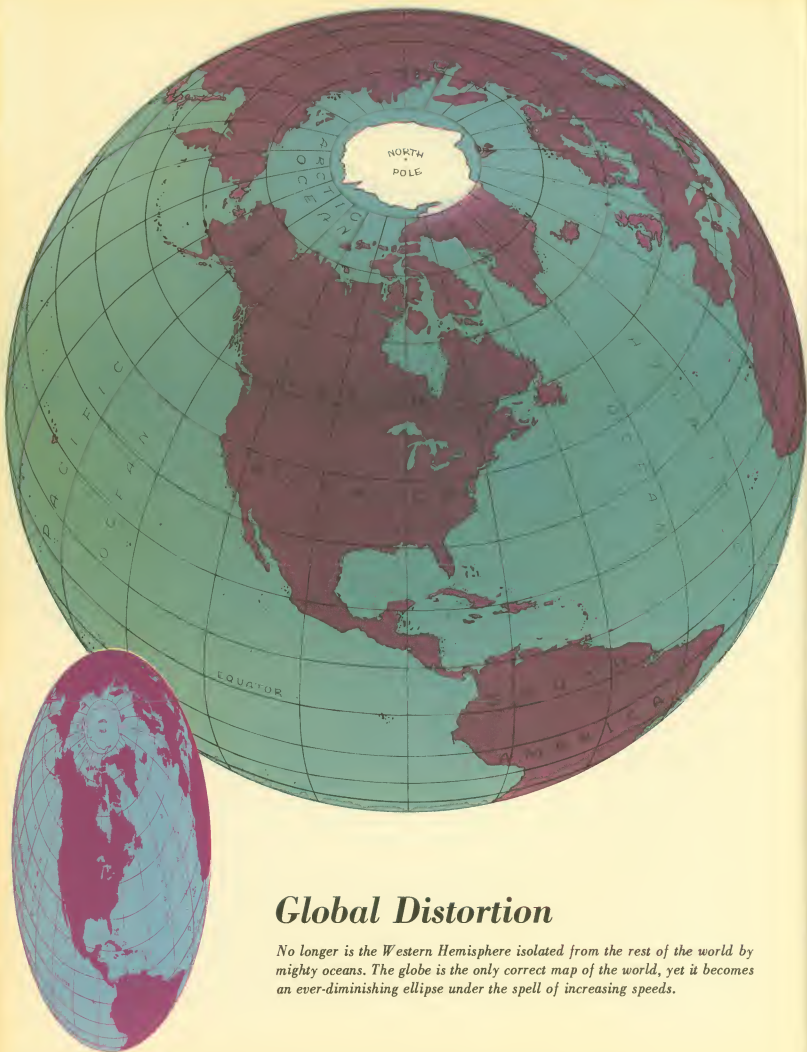
Until very recently only a few explorers and scientists realized the importance of the Arctic regions, which with the coming of the airplane play a more and more interesting and significant role in the affairs of men and nations. In some respects the North Pole is no longer at the top, but at the center, of the world.

is placed second to the winning of the war only in the time element. The Four Freedoms enunciated by President Roosevelt and Prime Minister Churchill in their Atlantic meeting are taken seriously. Americans want the boundaries drawn after this war so that the peoples of all nations can live; so that the natural riches are utilized to the best advantage of the entire world. They desire the end of exploitation of millions for the benefit of a handful, and they want to see established some sort of a world body which will prevent the recurrence of war.

The war and the peace cannot be won unless modern geography is understood. In modern times the geographer should not take second place to the inventor, industrialist, scientist, or business genius. He

is the modern strategist who can wage war or prepare the way for a lasting peace. By properly evaluating and reinterpreting the facts that lie at everyone's disposal, by noting the shifts and changes as they bear upon human interests and relations, he can chart the weaknesses and strengths that are the keys to intelligent action.

A comprehensive understanding of modern geography by the general public is imperative. The people, if they are determined to gain a victory in war and peace, must know the location of the world's riches, the meaning of boundary lines, the needs of nations. They must understand the meaning of time and space in the modern world. The furtherance of this knowledge is the aim of this book.



Global Distortion

No longer is the Western Hemisphere isolated from the rest of the world by mighty oceans. The globe is the only correct map of the world, yet it becomes an ever-diminishing ellipse under the spell of increasing speeds.

New World Horizons

*The geography of the Air Age
is a vital science.*

*Land formations, sea channels,
needs and resources of nations,
values of time, energy, and distance
are among the realities it
deals with.*

North America

THE THESIS that North America has become the center of the world, and that the conception of the Western Hemisphere is an obsolete hangover from the days of the early discoverers, can be supported in numerous ways. Three geographical factors have been important: 1. its location between two oceans and consequent easy access to all waters and lands of the world; 2. abundance of natural resources, including great fertility of soil; 3. temperate climate that favors large crops and spurs man to high endeavor.

Today the hopes of the world are focused on North America. It is the arsenal for the forging of weapons. It is the storehouse of food. After the war, North America's vast wealth will be required to rehabilitate the populations and rebuild the cities of the world.

North America contains over half the land in the Western Hemisphere and three-quarters of its people. In form, the continent is a great triangle standing on its point. At the point are Mexico and the Central American countries. Here is a mixture of Latin and Indian cultures. The rich body of the continent is occupied by the United States and the lower half of Canada. The

northern and widest portion is in the Arctic Circle. Great bleak areas of northern Canada and all of Alaska are in this region. The outpost nearest to Asia is Alaska; nearest Europe is the island of Greenland. Greenland is well located for a stopping point on an air route to Europe, but so far weather conditions have prevented its development as such.

Whereas Europe grew out of centuries of isolation and conflict between hostile races, North America was colonized by civilized men in a period when relatively easy communication was becoming possible. The settlers did not have to overthrow or assimilate huge native populations. It did not become too crowded to live on its own wealth. Once transportation methods were improved, it found ready markets for its agricultural produce in Europe. There were plenty of waterpower, minerals, and other raw materials for development of industry.

If natural advantages have made North America the most important continent of the modern world, the United States' larger share of these advantages has made it the greatest nation of North America.





Canadian National Railways

Canada and Alaska

Between Canada and the United States the only boundary is the one which history has made, the longest unfortified boundary in the world. The two nations have now joined hands in building a highway that will link Alaska to the United States.

MORE OR LESS alien cultures meet at the United States' southern border; but the great northern countries of America inherit the same North European civilization. Their political structure was copied in some degree from early Great Britain; their legal systems are based on the Bill of Rights and English common law. Canada is a British Dominion with a union of states and universal suffrage.

Canada is larger than the United States, but it has only a tenth as many inhabitants. Vast reaches of its territory are Arctic wastes. Its resources are more scattered than those of the United States. The majority of the people and most of the industry is concentrated in a 200-mile strip lying just north of the United States. Because of the small population the standard of living is high.

Only about seven per cent of Canada's land is occupied by farms and less than half that is actually tilled. Other sections may in time be put under the plow, but the best lands have already been occupied. The major single crop is wheat, grown in the prairie provinces lying above North Dakota and Montana. A fringe lying on the north of this area contains smaller, cleared farms where diversified farming is practiced. Eastern Canada is suitable for pasture, hay, and other food crops. Consequently the dairy industry is important; the market is readily available.

Fishing occupies a sizable portion of Canada's people, though inland waters have been overfished.

Much of the catch is sent to the United States; takes are sometimes sent out of isolated areas by airplane. The industry goes on the year round, for nets are placed under the ice in those waters which freeze over. The Hudson's Bay Company is famous in the song and story of North America. Fur-taking is still important and the trappers, mostly Indians, come out of the wilds each year to deliver their catch at the company's many outposts.

Canada has fairly important deposits of iron and coal, but they are so widely scattered that the best use can not be made of them. In fact, the iron and steel industries, mostly located in Ontario, depend mostly on raw materials imported from the United States. Other minerals are relatively more plentiful and easier of access. There are extensive asbestos, nickel, copper, lead, silver, and gold deposits. Petroleum, however, is scarce.

The forest industry is, next to agriculture, Canada's most important industry. The hardwoods had been almost depleted when the world market for newsprint and other papers made from wood pulp developed. The United States imports most of its newsprint from Canada. Other important industries are vegetable and meat processing, manufacture of metal products, and textiles.

The outlying points of Canada are strategically important. To the east is Newfoundland, with deeply indented, cold, and foggy coasts. Most of the inhabitants

Max Sauer





Physically, Alaska is part of Canada. West of the great Mackenzie River, which flows north and empties into the Arctic Ocean, are the mountains where the headwaters of the Yukon River originate. The Yukon flows out of Canada into Alaska and down to the Bering Sea.

are fishermen. On the northeast is Greenland, the huge ice-cap island which is Denmark's only colonial possession. To the west is Alaska—physically a part of Canada—and the foggy, barren Aleutian Islands.

At Bering Strait, off the northwestern tip of Alaska, North America is only fifty-seven miles from Asia. In some earlier age the two continents probably joined here. Since a foothold in Alaska, though far from centers of population and production, would nevertheless be a foothold on the North American continent, Alaska was purchased from Russia by the United States in 1867. Due to the mountainous character of British Columbia, which separates the United States from Alaska, communication between the territory and the motherland has been almost entirely by sea and, later, by air.

Alaska remains undeveloped. The population is under 70,000, mostly Indians and Eskimos engaged in fishing and trapping. Only a small area is cultivated, though the United States government in 1935 tried to increase the acreage by settling farmers from the states in the Matanuska Valley. The territory is not entirely frigid, however. It is merely that seasons are short, the soil is not deep, and means of transportation

are poor. Grazing of reindeer is important to Alaska, though failure of the United States to acquire a taste for the meat prevents the creation of an export market. But Alaska gets more wealth from the sea than from the land. Salmon fishing is the most important take, and there are smaller catches of herring, halibut, and shellfish. The fur seals caught off the Pribilof Islands are the most valuable product of the fur industry.

Considerable mineral riches exist, but they are not yet well developed. Copper has been mined more extensively than any mineral except gold.

The mountainous nature of the country has made railroad construction difficult. Those lines which exist are short and run only a short distance from the ports. Rivers are deep and wide enough for navigation, but they are frozen during most of the year. Highway construction is not easy both because of the difficult terrain and the fact that the extreme cold cracks hard surfacing materials. A highway from the United States to Alaska is under construction and will be of incalculable use in the future.

The Aleutian Islands, advancing far to the south and east in the Pacific Ocean, add immeasurably to the strategic importance of Alaska.



Department of the Interior

United States

The United States is a compact unit with good, ice-free harbors on three sides. It lies between the extremes of hot and cold, it has easy access to great deposits of minerals and coal, and contains broad regions of productive land. In short, its well-rounded wealth has permitted the growth of almost every essential industry.



THE UNITED STATES got a greater fortune from nature than any other country of the world. It has forty per cent of the known supply of coal. It pipes two-thirds of the world's oil. Iron is abundant and, furthermore, much of it is close to the surface where it can be mined easily. It has more zinc and lead than any other country and it is second to Mexico in silver production; next to Transvaal in gold production. Good ports give easy access to the water routes of the world. The Great Lakes and the many rivers, augmented by canals, have facilitated inland transportation. Broad, fertile lands feed the nation and leave surpluses for export. The list of advantages could be extended indefinitely—the only real scarcities are rubber and tin.

Only two major obstacles faced the early settlers: the American Indians and the forests. The Indians, once they were certain that the whites intended to appropriate their lands, fought fiercely, but they were relatively few in number and the newcomers had more efficient weapons. Clearing the forests required only strong backs and the will to work. Once the settlers had

pushed out to the prairies, even this was unnecessary. Most of the colonists had been glad enough to leave their native lands, and consequently they experienced no difficulty in thinking of themselves as citizens of the New World. The English language implanted by the early arrivals was accepted by those who followed, and the fact that a common tongue was spoken from coast to coast was not unimportant in the development of communication and trade.

The United States may be divided into four chief geographical regions:

1. The Atlantic lowland, sloping gently to the Appalachian belt. The New England section is rough; the piedmont plain from New York to the Florida Strait is generally smooth.
2. The Appalachian region, which reaches from the Gulf of Mexico to Canada.
3. The plains and plateaus between the Appalachians and the Rockies.



New York Central System

The rivers and lakes of the United States, providing a vast system of inland waterways, have been of major importance in the country's development.

4. The Rocky Mountains and the region west of them.

The great industrial areas are along the North Atlantic seaboard and around the Great Lakes. The textile industries are extremely important to New England and the New York region, though in recent years some of the factories have moved elsewhere, chiefly to the south where cheaper labor was to be had. The leather, brass, copper, fur, printing, and novelty industries are important. Heavy industries are concentrated in the Great Lakes region. Detroit, Chicago, and Cleveland are chief of the many cities which turn out iron and steel manufactures.

American agriculture grew wealthy because European nations, expanding industrially, wanted foodstuffs and were willing to trade manufactured products for them. When the United States developed its own industry, thus requiring less imports, European nations looked elsewhere for agricultural produce. The trend was augmented by the fact that American farmers had accustomed themselves to a high standard of living and consequently needed high prices, while those of many other sections were satisfied with less. The decline of exports resulted in great harm to American agriculture, and the regaining of world markets is essential if agriculture is to hold its place in the nation's economic life.

The crops which the United States can produce are almost limitless. Farmers of the eastern states produce vast supplies of fluid milk for the industrial cities,



American Airlines

while at the same time producing a variety of products for their own use and sale. The Middle West grows chiefly corn and hogs, though here, too, diversified farming is carried on. Minnesota and Wisconsin are the great butter and cheese producing states. The states west of the Middle West—Kansas, the Dakotas, Montana, part of Nebraska—comprise the great hard wheat growing region; soft wheat is produced in the Pacific Northwest. On the dry, high plains and plateaus farther west are grazed sheep and cattle. California, Florida, and a strip along the Gulf of Mexico produce citrus fruits and other subtropical products. The great cotton region extends from northeastern North Carolina to western Texas.

The fuel and mineral resources are widely scattered. Pennsylvania is the major coal producer, with West Virginia, Illinois, Kentucky, Ohio, and Indiana following. Texas, California, and Oklahoma lead in supplying petroleum, in that order. Minnesota is the great iron mining state by far, followed by Michigan and Alabama. Arizona, Utah, and Montana are the leading copper producers. Idaho leads in silver, California in gold, Oklahoma in zinc, Missouri in lead, Michigan in salt.



Mexico

Increasing tourist trade and other relations have helped toward a better understanding between the United States and the Latin American countries, particularly Mexico.

MEXICO is a land of sharp contrasts. Side by side are modern factories and primitive handicrafts. A short distance from modernistic structures are straw and adobe huts surrounded by fences of growing cactus. The art-lover views the ancient religious paintings in the fine old Spanish churches, then walks a short distance to inspect the striking modern murals of Rivera and Orozco.

The Indian influence is seen everywhere in the Mexican culture. Civilization here is very old. The Aztecs were an advanced people when Cortes conquered them. Today three-quarters of the people are of mixed blood; only about ten per cent are pure white.

The Central Plateau, which includes the Valley of Mexico and Mexico City, the capital, is the most densely populated region of the country. Its climate is cool and rain is generally sufficient for crops. Some irrigation is necessary. Most of the population depends on the land for a living. Corn and beans are the chief

food crops. Many of the manufacturing centers are located here, and minerals are extracted from the plateau ranges. Mexico is the world's leading silver producer.

The dry northern plateau, facing Texas and New Mexico, is the largest region. Cattle ranching, mining, and farming occupy the population. The Sonoran desert, on the Gulf of California, is chiefly a ranching section. The Eastern and Western Sierra Madre, on the edges of the plateau, are partly forested. They have some mineral wealth, but their narrow valleys are not of much account for farming. The eastern coastal lowland is rich in petroleum, and Mexico's valuable supply of this resource has been important to her international trade and relations as well as to the nation's wealth. Mexico has long coastlines but has never been a strong sea power. The southern portion of the east coast broadens into tropical Yucatan, where are located extensive ruins of the Maya civilization.



Pan American Airways System

Central America

Though only three per cent of the land of Central America is cultivated, agriculture is the chief industry. The mild coffee produced is much sought after in the United States and Europe.

ROUGHLY seven hundred air miles south of the tip of Texas is the colorful and in many ways primitive world of Central America—Nicaragua, Guatemala, Honduras, Costa Rica, El Salvador, Panama, and the small colony of British Honduras. In recent years North American travelers have “discovered” the attractions of these countries and peoples. The population is largely composed of Indians, who retain the customs of their ancestors.

The two Mexican mountain ranges join and continue south, forming a high backbone for Central America. The eastern slope is wet, the western drier, but the whole is tropical. Most of the people live on the western slope or on the central plateau. Transportation has been exceedingly difficult. There are few good motor highways and railroads. Much of the travel between

countries has been by coastwise steamer, and consequently they are not unlike a group of small islands. Each country has striven to maintain its national entity. Lately air services have been highly developed and they are breaking down old barriers.

The Central American countries have been called the “banana republics” because they are important producers of that fruit. Bananas, which require a hot temperature and heavy rainfall, are grown near the coast so that they can be transported quickly to the areas of major consumption, which are the United States and Canada. Honduras and Guatemala are the major producers. The industry is in the hands of foreign interests and is of minor importance to most of the people of these countries. The Central American forests contain valuable hardwoods.



Ewing Galloway

Panama Canal

Trade routes are war routes, and the Panama Canal is a vital spot in hemisphere defense. The whole area surrounding the Panama Canal is a tremendous land-and-sea fortress in which the sentries are the outer naval and air bases.

THE GREAT engineering feat of constructing the fifty-mile Panama Canal made two islands of North and South America. It placed Eastern America eight thousand miles closer to Asia, making it the Near West instead of the Far East. (But the European-coined "Far East" has remained in American usage out of habit.) The west coast of South America was among the most isolated regions of the world; the canal brought it within a few ship days of Galveston and New Orleans. Vancouver, formerly considered a remote northern port, became Canada's foremost grain port for trade with countries of the Atlantic.

The canal cuts across the center of Panama between the Atlantic Ocean (Caribbean Sea) and the Pacific (Gulf of Panama). An area five miles on either side of the center of the canal is called the Canal Zone and is owned by the United States. Colon, at the Atlantic entrance, and Panama, at the Pacific entrance, are excepted. Three sets of locks at each end raise and lower ships. Since 1923 the Panama Canal has handled more traffic than has the Suez. Before 1941, there was talk

of constructing a new canal through Nicaragua.

The Panama Canal was finished in 1914 after a long history of bickering and a decade in actual building. In 1840 Great Britain had planned to build a waterway, but the United States objected on the ground that such a step would violate the Monroe Doctrine. A compromise was worked out which provided that neither nation would have complete control of a route through Central America. In 1878, Colombia, which owned the region, granted a French concern the right to build a canal. The company went broke and sold its assets to the United States. A United States Army engineer, G. W. Goethals, was in charge of the gigantic construction job, but his task would have been impossible of accomplishment had not Dr. Wm. C. Gorgas stamped out tropical diseases which had taken the lives of countless workers.

The canal is heavily fortified. On the east are island sea and air bases. A string of defenses stretch from the Bahamas to South America. Strong coast defenses guard the approaches.



Philip Hanson Hiss

The Caribbean Sea

America's Mediterranean, and gateway between the two continents. United States control of the Caribbean makes the surrounding countries economically and politically dependent upon this nation.

THE GULF OF MEXICO and the Caribbean Sea are to the Americas what the Mediterranean is to Europe—a central sea. The American body of water is not entirely land-bound. Double strings of islands—the Cuban group and the Bahamas—form an arc at the Atlantic entrance. This arc is now firmly fortified. This Mediterranean of the West is the water passage between the Americas, and consequently it must be controlled by them if trade is to be carried on. The sea is as necessary to the Caribbean countries as the Mediterranean is to Italy.

The surrounding lands produce more oil than any region of the same size in the world. They are rich in

minerals, and the fertile soil produces great quantities of tropical fruits and vegetables. They are capable of supplying much goods formerly imported into the United States from Asia and Africa. In exchange, they need manufactured goods. Living standards, particularly in the beautiful but undeveloped islands, are low, and tropical diseases still exact a deadly toll.

The rapid advancement of this region is essential both for the protection and the economic welfare of the Western Hemisphere. Important strides have already been made. The Good Neighbor policy of the United States is aimed at improving relationships and living conditions.



Pan American Airways System

South America

A few minutes of air travel can surmount natural or man-made barriers that have successfully withstood centuries of progress, barriers that have isolated nations or regions and have caused poverty, ignorance, and backwardness.

NORTH AMERICA was settled by hopeful people seeking freedom and a new way of life. Europeans who first visited South America came only to plunder. Francisco Pizarro and his little band of Spanish conquistadors overthrew the fabulous Incas and captured their tremendous stores of gold. On their heels came other bold and cruel men, conquering, plundering, forever in search of El Dorado, the mythical country of the Golden Man. The loot was placed as quickly as possible in ships, and the adventurers who were still alive sailed home for a life of luxury.

When colonists finally arrived, they were severely handicapped by natural barriers. The Andean highlands separate the east from the west. Much of the country is either desert, high and barren plateaus difficult of access, or tropical rain forests. Exploration was difficult, and there was trouble in adapting the wide varieties of climate and soil to agricultural purposes. Regions were cut off from each other, making internal trade difficult.

The settled countries face away from the center of the continent toward the sea. On the east coast are the broadest plains and most fertile uplands. On the east, too, is the Atlantic and there are navigable rivers. On account of these more favorable natural elements and better opportunities for trade, this section contains most of South America's population. The countries of the west coast have been considerably aided, however, by the Panama Canal.

South America gained its independence from Spain in the early years of the nineteenth century. The great national heroes—Bolívar, San Martín, O'Higgins—were produced in this era of revolution. Republics were established. The 1930's saw a strong effort of the Nazis to gain influence in the South American countries, but, while they at first had isolated successes, in the end the republics chose to stand firmly with the other nations of the Western Hemisphere.

The attractions to travelers in South America are many. Ruins of ancient civilizations are to be seen.

Many of the regions vie with Switzerland in beauty. The gay carnivals, particularly that of Rio de Janeiro, are famous. Hunting and fishing are good, and the people are both interesting and hospitable.

A short summary of the wealth and life of each country provides an idea of the importance of South America as a whole:

Argentina. The Broad Rio de la Plata estuary, on which Buenos Aires is situated, was a great advantage in settling this region, for the estuary and the Parana and Uruguay rivers, which empty into it, are navigable. The Indians gave some trouble at first but, as in other regions of the east coast, they were conquered and driven out. No horses or cattle existed before the arrival of the Spaniards, but once loosed on the Argentine pampas the animals multiplied rapidly. In time great *estancias*, or cattle ranches, were established and livestock raising became the major industry. The *estancias* often resemble feudal estates and their owners became wealthy enough to maintain town houses in Buenos Aires and other large cities. Beef-raising is still the chief industry, but other agricultural produce is important to the national economy. Products include mutton and wool, dairy products, wheat, corn, flax, sugar, cotton, and fruits. Argentina lacks minerals and coal. Consequently heavy industry on a large scale is impossible. Manufactures have come from the United States and Europe, but Argentina is making an effort to build up light industries to supply local needs. Great packing plants exist for the processing of livestock; and the wine, milling, and textile industries are fairly important. Argentina's level pampas makes railroad building easy and as a result it has the best rail system in South America. Lines run into Brazil, Paraguay, Bolivia, and across the Andes to Chile. The motor highways are not good, chiefly because there is a lack of rock and other road-building materials. Because the natives were either annihilated or driven out, the inhabitants of Argentina are predominantly white.

Uruguay. Montevideo, the major city, is on the Rio de la Plata—across from Buenos Aires—and consequently Uruguay has a navigable stream. But, unlike Argentina, only a small portion of the country is flat. Most of it is highlands which are not well adapted to agricultural use. The raising of livestock is the chief occupation. Crops include wheat, barley, corn, oats, linseed, and wine.

Brazil. Larger than the United States, a country of wide variations in climate and topography, Brazil



Pan American Airways System

The level and almost limitless pampas of the Argentine provide some of the finest cattle country in the world.

has vast developed and undeveloped riches. Northern Brazil is a low plain drained by the great Amazon River and occupied mostly by rain forests. In the south are the Brazilian highlands. The latter region is the best for agriculture and here most of Brazil's metals—chiefly, iron, manganese, and gold—are found. The country has little coal or petroleum. The great coffee plantations which supply about half the world's coffee are located in the rolling plateau region west of Rio de Janeiro. Uniform temperatures and a relatively small amount of rainfall are necessary for the best coffee growing conditions. Like the cattle ranchers of Argentina, the coffee planters often acquire great holdings and they usually live in the cities while managers



South America cannot be described in generalities. A group of varied nations, with an older culture than that of the United States, great wealth, European ties, it is a complex land. From the Andes to Amazon jungles and the pampas of the Argentine, from Colombia to Tierra del Fuego, it has extraordinary range of climate and setting.



South America of the Air Age

An area in South America larger than the United States lies more than fifty miles away from any ocean shore or railroad. Rail lines have not been built into the interior, and few automobile roads have departed very far from the coastlines. When the airplane came upon the scene, it flung a network of lines across the continent, using a third dimension to bypass the mountain ranges, the deserts, and the green belts of jungle. As a result, South America's highly civilized nations skipped the railroad age.

direct the workers on the great *fazendas*, or plantations. Brazil's second export crop is cotton, grown in the northeast and south. The first region produces long-staple tree cotton chiefly; the cotton of the second is more like that grown in the United States. Some coffee planters have turned to cotton, and small farmers find its production more suitable to their facilities than coffee. Coffee and cotton, with cacao, are the export crops, but the majority of the farmers engage in other types of farming to produce food—beans, grain, and meat—for the nation. Rubber production in the Amazon forests declined when it was found that the Dutch East Indies and Malaya were more suitable,

but now an effort is being made to increase it. Brazil nuts and Carnauba wax are other important forest products. The nation's industry is not yet well developed, though important progress has been made in recent years. Brazil differs from the rest of South America in that Portuguese, rather than Spanish, is the common language. The early Portuguese settlers imported slaves from Africa and today the population is largely a mixture of white, Negro, and Indian.

Paraguay. This small inland country between Brazil and Argentina is perhaps the least developed of the South American nations. The people have a strong strain of Indian blood. Chief products are



cotton, which has become increasingly important; yerba mate, from which a tea is made; livestock, tobacco, sugar, beans, mandioca, and oranges.

Venezuela. The Maracaibo Basin is one of the great petroleum producing regions of the world, though large-scale exploitation began only a decade and a half ago. The country's savanna lowlands are used for grazing livestock, while corn, beans, rice, tobacco, and cotton are grown on the highlands, where most of the population lives. The latter region yields also minerals and forest products.

Colombia. Part of the Maracaibo Basin is in Colombia and consequently it is an important petroleum-producing nation. Another important field has been



Pan American Airways System

In the highlands of South America the Air Age crosses the mountain trails of a primitive era.

developed in the valley of the Magdalena, Colombia's great river. As in Venezuela, most of the inhabitants dwell on the highlands, though the plateau is difficult of access. Until the advent of the airplane, Bogota, the nation's capital, could be reached only after a long and tedious journey by river and rail. Colombia is often considered the most cultured nation of the Americas. In Bogota, it is said, a poet receives more consideration than a banker.

Guianas (British, Dutch, and French). These small colonial possessions on the north coast of South America have few natural resources, being hard put to it to support their populations even on a very low scale.

Peru. On the Andean plateau, which comprises a large part of Peru, Ecuador, and Bolivia, lived the royal Inca family which ruled the Indians of the region in an efficient but paternal fashion. The Incas took the gold and other riches for themselves, which made the gathering of it easier for Pizarro when he appeared in the early part of the sixteenth century. The ruins of this civilization make of Peru, and particularly the city of Cuzco and its surroundings, one of the most fascinating of the archeological regions of the world. Peru has important supplies of petroleum and copper which, with cotton, make up most of the country's exports. In the highlands the llama continues to be the chief beast of burden, although the load it can bear is small. The eastern lowlands are fertile, but Peru finds difficulty in exploiting them because of the difficulty



Pan American Airways System

The western coast of South America is a thin strip separated from the main body of the continent by the soaring ranges of the Andes. Without the Panama Canal, this region would be isolated from the rest of the world. Among the chief ports on the west coast are Valparaiso in Chile, Callao in Peru, and Guayaquil in Ecuador.

of transportation over the Andes. The Central Railroad from Lima across the mountains climbs more than 15,000 feet in the first 100 miles and has 16 switchbacks, 65 tunnels, and 61 bridges.

Ecuador. The Andes make transportation in Ecuador difficult, as they do in Peru. The principal crop is cacao, grown along the coast. Coffee is grown in the highlands and the usual South American foodstuffs are produced. Forest products are vegetable ivory, from which buttons are made, and tagua nuts. Ecuador has fewer mineral resources than Peru and Bolivia.

Bolivia. Tin accounts for two-thirds of Bolivia's exports, and the commodity has skyrocketed in importance since the Japanese seized the Dutch East Indies and Malaya. Formerly most of the tin ore was shipped out of the country for processing, but lately smelters have been constructed in Bolivia. The tin is mined in the Bolivian highlands. Silver, lead, zinc, antimony, tungsten, and vanadium—the last three important in the making of steel—are produced also. Bolivia has the same transportation difficulties as Peru and Ecuador, and, as in those countries, the population must work hard to grow sufficient foodstuffs. Indians comprise a large part of the inhabitants of all three of these countries.

Chile. Copper and nitrate are the major exports of this long and narrow country of the western coast. The nitrate, used for explosives and fertilizer, is found in

the arid northern region. Lying near the surface, it is easily mined; at refining plants it is separated from the earth and other foreign elements, packed in sacks, and sent to the nitrate ports. Iodine is an important by-product and consequently Chile is an important producer of this commodity. The chief copper mines are in the northern desert region also, but they are on the Andean slopes near the eastern edge of the country. Gold, silver, and other metals are produced. Central Chile, the agricultural area, contains most of the inhabitants. Grapes, grain, and beans—beans are an important part of the diet of most South Americans—are grown. Most of the farms are of medium size. The lake region in the central portion of the country has become increasingly attractive to travelers because of its great beauty. In southern Chile are forests of some value. In the southernmost area are large sheep ranches. The whole of this end of Chile is sparsely populated.

Guiana. British, French, and Dutch Guiana (Surinam) are the only European colonies on the South American continent. French Guiana, an inhospitable region where the famous French penal colony of Devil's Island is located, reflects the unfavorable aspects of the region, while Surinam (Dutch Guiana) with its very valuable bauxite deposits and vast oil refineries on the islands of Aruba and Curacao present a much different picture.



The Pacific Ocean

The alluring, boundless, rolling Pacific main covers more than one-third of the surface of the earth. Yet if the global view above is taken to be a true picture of its size, as of the 1930's, the speed of today's transportation and communications has caused the Pacific to shrink so that it is no larger than the tip of one's finger. The old three-week journey is now a twenty-four-hour trip. Australia, at the farthest edge of the great circle from the United States, draws nearer and nearer to San Francisco.



Oceania

From the time of the Yankee whaling captains who rounded the Horn to only yesterday, the natives of the South Seas have seemed to Americans the most faraway people in the world.

THE 15,000-odd islands in the Pacific known as Oceania have become the far-flung sentinels of the air age. Before that the smaller of them were important chiefly as markets and for the romance that surrounded them. Some are extremely beautiful; the South Sea islands were a paradise on earth.

In general, the islands fall into three groups. There are the Polynesians, ranging from the Hawaiian string in the north to the New Zealand group in the south. Included in the Melanesians are New Guinea, the Fiji Islands, the Solomons, and New Hebrides. In the Micronesian group are Mariana, Marshall, the Caroline Islands, and many more. Australia is technically a part of Oceania, but in general it is the smaller islands that are referred to under this heading.

The islands lie in strands of a general southeast-northwest direction, following the main outlines of the

continents and mountain ranges, indicating that whatever force lifted the continents from the sea also caused the appearance of the islands; it may have immersed others at the same time. The islands are of two kinds—coral and volcanic. The coral islands consist of sand banks, called atolls, which were washed by the ocean on the coral reefs. Most of them at high tide are not more than ten or twenty feet above sea level. Seeds carried by birds, by the sea, or by the wind have caused the growth of considerable vegetation on some of them. Others, because of extended droughts, are so barren that they have been called the deserts of the Pacific.

The volcanic islands are higher, their elevations varying from a few hundred to many thousands of feet. Some of them have surrounding coral reefs which form excellent, quiet harbors. In the islands of the north and south extremes of heat and cold are modi-



Australian News & Information Bureau

Ewing Galloway

Polynesia

The natives inhabiting the Polynesian Islands are descendants of venturesome sailors, who may have come from the eastern coast of India.

fied by ocean winds and currents. Excluding Australia, the combined area of Oceania equals about that of the eleven westernmost states of the United States.

Many of the islands were discovered soon after Balboa first set eyes on the Pacific from its eastern shore in 1513. Having heard from the Indians of a vast sea to the west, he crossed the Isthmus of Panama after incredible hardships, and, standing on a mountain peak, he looked down upon the ocean and claimed it for Spain. Magellan, a Portuguese voyaging under the Spanish flag, entered Pacific waters in 1520 after



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sailing around the southern tip of South America through the straits that bear his name. He crossed the 11,000 miles of sea to the Mariana Islands in ninety-eight days, losing two of his five ships on the way. Today the same distance can be covered by plane in thirty-five to forty-five flying hours. Magellan continued to the Philippines, where he was killed by the natives. Two of his ships forged ahead to Borneo and the Moluccas. One ship managed to reach Spain, completing the first circumnavigation of the world. The voyage had required three years.

The racial types dwelling in Oceania are by no means pure. There are indications that many of their ancestors traveled from far places of the East to settle on the islands of the Pacific, and in some early era interchange between them must have occurred. The Polynesians are believed to have come from the east coast of India; many of their words and traditions are similar to those found in that country. But they have few of the bold characteristics of their seafaring forefathers. The Papuans of New Guinea are less advanced even than the Polynesians. They are a black, frizzy-haired, small-statured race. The Melanesians are Papuans with a strong Negroid strain. The Micronesians are a mixture of Malayan with Polynesian and Melanesian bloods.

Life in the southern tropical islands is simple. Natives have been able to live with little effort on the

Oceania

East of Japan and the Philippines runs a dividing line separating the islands of the Pacific into two major groups. The islands following the coastline of Asia, including Japan, the Philippines, and the Netherlands East Indies, are not included in the large group known as Oceania. The total area of the islands of the Pacific equals that of our eleven western states. There are countless small reefs and atolls in each small group of islands, so that any listing of the actual number of islands is impossible.

Among the principal islands and island groups of Oceania are:

POLYNESIAN: *Hawaii; Ellice; Phoenix Islands; Marquesas; Cook; Society; Tuamotu; Tubuai; Friendly; and Samoa.*

MELANESIAN: *New Guinea (Papua); New Britain; Solomon; New Caledonia; Loyalty; Fiji; and New Hebrides.*

MICRONESIAN: *Marianas; Pelew; Caroline; Marshall; and Gilbert.*
Australia, although it is a continent, is part of Oceania.



These natives are Papuan, so-called for the island of New Guinea, or Papua. They are negroid and inhabit the hundreds of islands near Australia to the north and east.



Australian News & Information Bureau

luxuriant tropical vegetation. Huts are easy to build and the natives are good at handicrafts, particularly at weaving fabrics. They build good seafaring canoes and inter-island warfare used to be common. Western civilization has not penetrated many stretches of the jungles, and here cannibalism is still practiced.

All the great powers have established air and naval bases on the islands. They are necessities of warfare and they are stepping stones across the Pacific in peacetime. The Japanese islands, which form a barrier between the islands owned by the United States and Asia, were German-owned before World War I. At the peace conference they were made mandates of Japan and today they are a mainstay of Japanese power in the Pacific.



America's Pacific Isles

When Clipper planes began to fly the Pacific, the value of America's Island possessions in the world's largest ocean became clear. The Hawaiian Islands, Midway, Wake, Guam, and Samoa are stepping stones to the East.

UNTIL JAPAN'S ATTACK on Pearl Harbor, most Americans had thought of the Hawaiian Islands merely as an ideal vacation land where natives played soft music and the women wore grass skirts. Bright travel posters showed tourists attired in spotless white suits being greeted by brown-eyed maidens wreathed in smiles and laden with flowers. Then, on December 7, 1941, the grim military aspect of the islands became apparent to all Americans. The truth is that Hawaii is both a beautiful vacationland and a place of vast strategic importance to the United States.

The Hawaiian Islands were annexed by the United States during the Spanish-American war, but only indirectly because of it. The Hawaiians had long before requested status as a territory, but the United States had declined because it wanted responsibility for no possessions outside the Western Hemisphere. Admiral

Dewey's victory at Manila Bay and the interest in the Philippines gave new value to Hawaii, and the United States changed its mind. The islands were annexed in 1898.

Hawaiians are United States citizens, like residents of Puerto Rico and Alaska. They elect a representative to the United States Congress. Only about fifteen per cent, however, of the nearly half million inhabitants are natives or part natives; one-third of the entire population is Japanese.

The islands number twenty, of which only nine are inhabited. Oahu, on which the capital city of Honolulu is located, is the most important of the islands. Hawaii, largest of the group, is about half the size of New Jersey. The islands are of volcanic origin and, since they are just within the tropics, the climate is pleasant and productive. The major crops are sugar



Canadian Pacific Steamship Lines

Our island possessions in the Pacific, from the Aleutians to Samoa, stand like sentinels in mid-Pacific. By means of these strategically located outposts, the United States reaches across the ocean.



and tropical fruits, chiefly pineapples. Sugar is produced with the aid of irrigation and the yield is greater per acre than that of any other region of the world. Most of the crop is exported raw to the United States and refined there. The pineapples are canned on the islands before exportation. Both industries have been developed by American capital. Because the region is not suited to diversified agriculture, much of the islands' food—wheat, pork, beef—is imported.

The Hawaiian islands are the crossroads of the Pacific, and as such they assume great importance as naval and air bases. Pearl Harbor, chief Pacific base of the United States fleet, is on the island of Oahu fifteen miles from Honolulu. The land-locked harbor was considered safe from attack by sea and land. The air defenses proved inadequate when, without warning, the Japanese attacked. The damage inflicted was rapidly repaired and the air defenses were multiplied.

Despite possession of the Philippines and the Hawaiian Islands, the United States did not desire other Pacific islands until the 1930's. Changes in means

of communication made air bases valuable. Japan had become a powerful warlike nation and was seizing land as fast as possible. Consequently the United States laid claim to a string of islands in the central Pacific.

The right of the United States to them was at first disputed by Great Britain. But the United States pointed out that Yankee whalers had originally charted the spots of land, and that in the 1830's a United States Exploring Expedition had visited them. Two decades later Americans had dug nitrates in the islands and staked claims for future use. The valuable nitrate was obtained from guano, a rich fertilizer created by age-long droppings of birds. Investigation showed that claims had been filed for other islands held by Japan, France, and Great Britain.

One group occupied by the United States runs south from the Aleutians, off Alaska, to Samoa. Included are Midway, Johnston, Kingsman's, Reef, and Palmyra. The east-west series includes Wake and Guam. This latter group are the stepping stones between Hawaii and the Philippines.



Canadian Pacific Steamship Lines

The Philippine Islands

The Philippines lie entirely in the tropics, above the equator. The Filipinos are island people to whom railroads are naturally less necessary than ships. Communication, exchange of goods, transportation are largely by means of the sea.

BATAAN, Luzon, and Manila are words which were driven deep into the American mind by Japan's attack on the Philippines and by the gallant defense of American and Filipino soldiers.

The Philippines are a group of seven thousand islands lying between the Dutch East Indies and Taiwan (Formosa). They are really a part of the East Indian chain. Most of the islands are very small; only about a dozen are inhabited. The largest, Luzon, has an area equal to that of Ohio. The islands are of a mountainous nature and the climate is tropical.

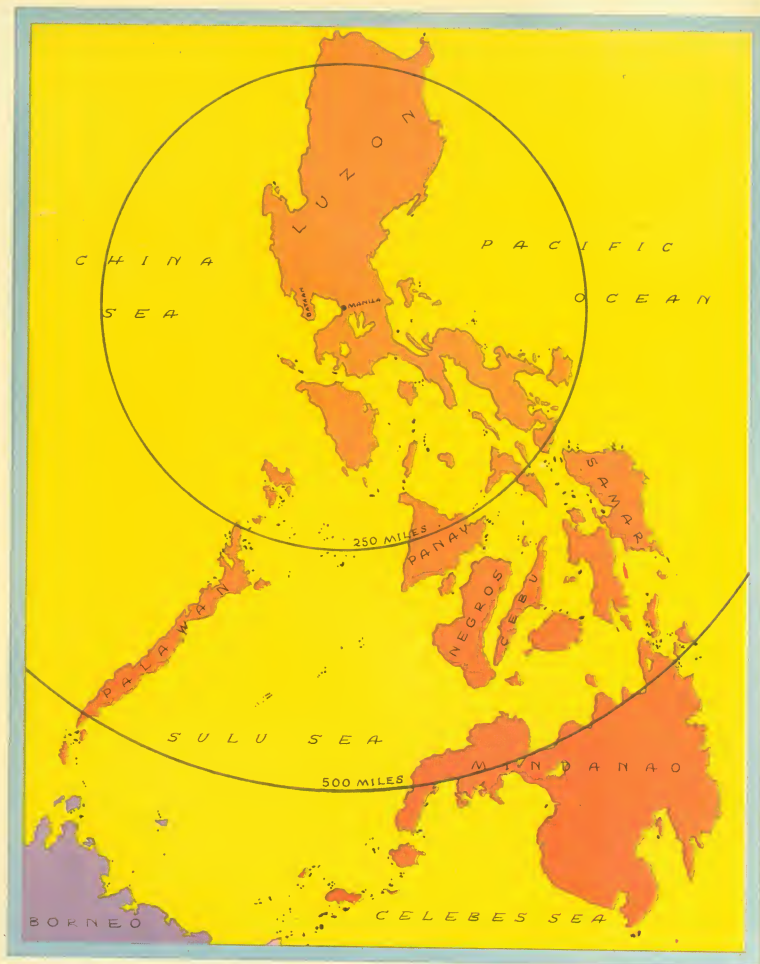
At the beginning of the Spanish-American war, in 1898, Admiral Dewey won the battle of Manila Bay. The Spanish, who had held the Philippines for three and a half centuries since Magellan's discovery of them in 1531, yielded them to the United States. Because they were six thousand miles from San Francisco and only five hundred from Asia, many Americans argued that possession by the United States was a mistake. The Filipinos rose against occupying American soldiers. The debate continued, and several years ago the United States Congress voted to give the Philippines independence in 1946. Negotiations were to be held concerning naval bases and fueling stations.

The population of the Philippines is diverse. Many tongues and dialects are spoken. The greatest number of people are of Malay stock, and it is supposed that long ago the Malaysians overran the islands. The original inhabitants were probably the ancestors of the small-statured, dark-skinned tribe known as Negri-

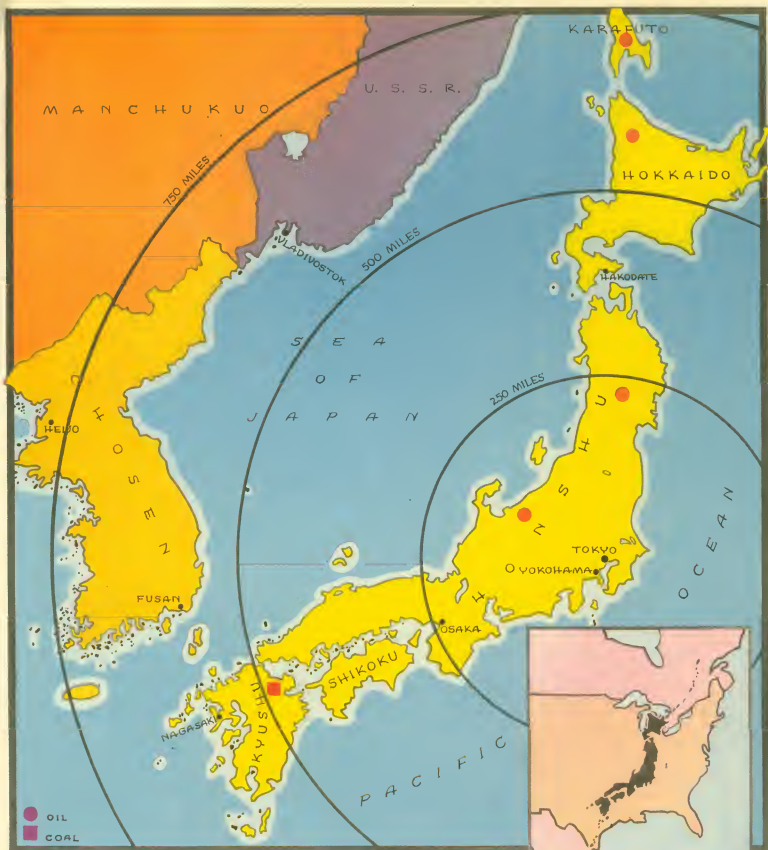
tos. About ninety per cent of the inhabitants are Christians; the remainder are either pagans—they were once headhunters—or Mohammedans. Spanish is still spoken by the educated classes, but English has become more general in recent years.

Agriculture occupies the majority of the population. Rice is the chief food crop and it is raised on irrigated lands along the coasts. The monsoon rains are plentiful. Rice and fish are the staples of the national diet, and consequently many Filipinos are fishermen. Corn and coconuts are other important foods. Sugar is an important cash crop, though opportunities have not been fully realized because the United States has developed the Hawaiian and Cuban lands more extensively. The greater part of the world's hemp supply comes from the Philippines. Small farmers raise it and put it through a crude manufacturing process before sending it to market. For draft purposes the carabao, or water buffalo, is used extensively. Not much livestock is raised for meat.

Mineral possibilities of the islands have not yet been fully explored. Large iron deposits, however, are known. Not much has been done with them, but they will be used in the future. Gold mining has become increasingly important, and some copper is produced. The forests which cover about half the total area are of value. Such manufacturing as exists is of a crude nature. Until their seizure by Japan, the islands sent about three-fourths of their exports to the United States and received manufactured goods in return.



The Philippine Islands



Japan

The Japanese islands are strung out along the coast of Asia, a distance, north and south, equal to the reach from Labrador to the southernmost point of Mexico; from east to west, the islands are spread over eleven hundred miles, a plane's flight from New York to Omaha. Japan's Island Empire, totaling less than the state of Montana, covers a sea area of millions of square miles.

Japan

The aggressive island empire of the East is one of the most ambitious nations the world has ever known.

WHEN COMMODORE PERRY arrived in Yedo Bay on his famous visit to Japan in 1853, the country had long been isolated from the rest of the world. Though theoretically ruled by a divine emperor, as today, real power was in the hands of the shoguns—state ministers—who had purposely kept the people ignorant of the outside world. The emperor regained power in 1868 and shortly afterward Japan began to accept new ideas and to try to overtake the modern world.

Japan's geographical position is comparable in many ways to that of Great Britain. Both are island empires lying near great continents; both have large populations; both are industrial nations. But Great Britain expanded and developed its empire in a day when large portions of the world were yet to be settled. Japan came late, and to get the territory desired it was necessary to make war against strong nations already in possession. This conquest was naturally resisted.

Japan proper is a string of islands, many of them very small, along the border of Asia. In total area they equal that of Montana, while the population is more than half that of the United States. Possessions include the large island of Taiwan (Formosa), at one end of the string, and the island of Sakhalin, at the other. Chosen (Korea), on the continent, has been held for a long time, and in the 1930's a puppet government was set up in Manchuria. Before the attack on the United States on December 7, 1941, Japan had wrested most of Northern China from the Chinese.

The Japanese islands are mountainous and only about twenty per cent of the land can be cultivated. The earth crust is weak and as a consequence earthquakes are frequent. Some of them have been very destructive. Because of the rugged nature of the terrain and the narrowness of the islands the rivers are short and swift, making waterpower plentiful. The only important lowlands are near Tokyo and Osaka. The climate is temperate and the monsoons are responsible for abundant rainfall.

Not much is known concerning the origin of the Japanese, or Yamato, race. It is believed that they are a blend of various Asiatic strains. Some Ainu blood is present also. The Ainus were a primitive people who



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inhabited the islands before the Asiatic tribes conquered them. Some full-blooded Ainus live on the northern islands.

About half the population gains its living from agricultural pursuits, though to eke out an existence many find it necessary to spend part time at some other task. Rice is the major food crop, as it is in most of Asia, and intensive cultivation makes two crops possible in some areas. The farmers live chiefly in small villages. Wheat, millet, barley, soy beans and vegetable crops also help to support the population. Tea is produced in considerable quantities. Japan has been the world's leading silk producer, and consequently the growing of mulberry leaves, which are fed to the silkworms, is important. As in China, most of the animals raised are for draft purposes. Because of the lack of animal meat, fishing is an industry of major importance. Japanese fishing fleets exploit native waters intensively and venture far from home shores.

Japan lacks sufficient coal and iron for extensive heavy industry, but light manufactures have been highly developed. Cheap labor has made it possible for Japan to compete strongly in the markets of the world. Textiles are the most important; cotton, woolen, rayon, and silk cloths are woven. Clay, glass, and wooden objects are manufactured in great numbers.



The Netherlands East Indies

More than fifty times the size of Holland, the Netherlands East Indies have been part of the Dutch empire since the seventeenth century. Between ten and twenty per cent of the home population had a financial interest in the colonies.

Netherlands Information Bureau

THE ISLANDS of the Dutch East Indies, particularly Bali, have become romantic symbols of tropical paradise. To the Netherlands they have been for centuries a storehouse of vast wealth. It is, in fact, the possession of these colonies, fifty times the size of Holland itself, that placed the tiny kingdom in the ranks of the leading nations; between ten and twenty per cent of the homeland Dutch have a direct financial interest in the islands. Ability to tap this wealth—particularly rubber and tin—is vastly important to the United States. Japan had coveted the islands long before she invaded.

The islands cannot be evaluated according to size. Borneo, larger than Texas, though important, is populated largely by semi-savages and is only partly explored. The small islands of Banka, Singkep, and Billiton, on the other hand, have been extensively developed for their rich deposits of tin. Java, most important of the islands, is the most thickly populated agricultural region in the world; Batavia, capital of the Netherlands Indies, is on Java. Madoera and Sumatra are also highly developed. The islands are mountainous, and thick tropical forests cover most of the mountains. Most East Indians are Mohammedans,

though there are a good number of Christians and about a million Buddhists.

The Dutch, since they gained possession in the seventeenth century, developed the potentialities of the islands with great care and skill. The wealth proved to be almost limitless. The land is fertile, and most of the people gain their living from it. The most valuable tree is the coconut. The total products of this palm, throughout the world, have a greater annual cash value than the total production of rubber. It is estimated that ten billion coconuts are used every year. Its oils make soap and margarine; its outside fibers provide rope and rough fabrics.

Almost all the world's cinchona—quinine—comes from the Indies. There are also great crops of sugar, tea, coffee, rice, tobacco, and spices. About forty per cent of the land is irrigated.

For the last quarter of a century rubber cultivation has been a major industry—the Dutch East Indies, with British Malaya, came to supply almost all the world's rubber requirements. Western and southern Java, northern Borneo, and a central section of Sumatra contain most of the rubber plantations.



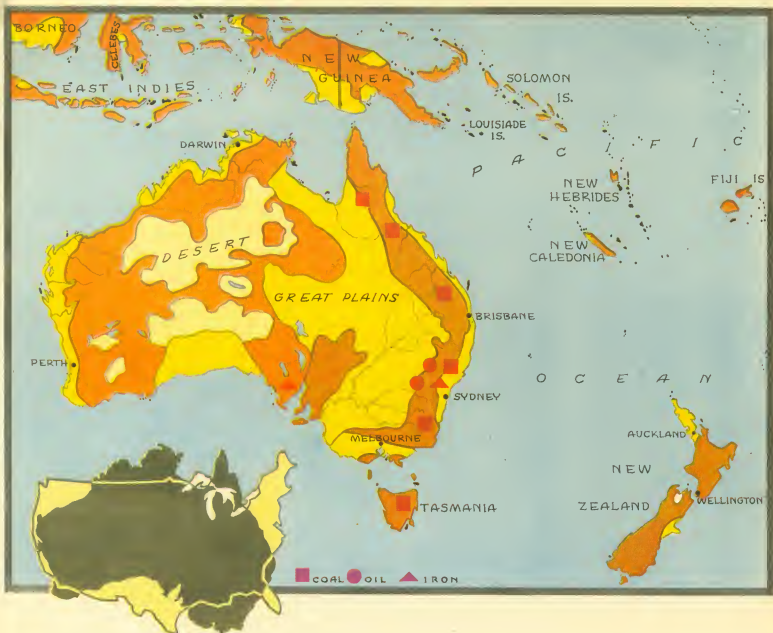
The Netherlands East Indies, a vast and sprawling colonial empire which made tiny Holland a wealthy world power. A land of limitless wealth skillfully ruled by the Dutch.



Borneo, Java, and Sumatra are important producers of petroleum. That is another reason Japan coveted the islands. Oil is scarce in Eastern Asia.

Tin, so important to the United States because she has no supplies of her own, is found in rich deposits on the three small Dutch East Indies islands. Being near the surface, it is easily mined. Without ability to get tin and rubber from this Asiatic region, the economy of the United States is thrown seriously out of balance.

Dutch rule in the Indies has differed from the British system in India. The Dutch have retained the native overlords and, through them, governed the population. While it was an autocratic form of government, it allowed greater social equality. Moreover, the Dutch were making really remarkable achievements in colonial reform up to the time of the Japanese invasion.



The Continent of Australia

The island continent of the South Seas was the last continent to be discovered; it is the smallest of the continents and the most remote. The Commonwealth of Australia consists of the six Original States: New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania.

THE SMALLEST of the continents and the last to be colonized, Australia lies in the South Seas twelve thousand miles from Europe. In the second century Ptolemy's map of the world showed this region as a mass of Unknown Land. Dutch and Portuguese on their way to the spice islands of the East touched on the barren west shore of Australia and concluded that the land was of little value. English explorers also reported it worthless. Finally, in 1770, Captain James Cook landed on the fertile east shore and the opinion of the world towards the continent began to change. Colonization commenced shortly after the American Revolutionary War.

Australia is composed chiefly of broad level or

rolling plains. The low mountain range is a climatic barrier for it reduces the moisture that the rest of the continent might otherwise receive. The interior and west are therefore arid; the best soil for agricultural purposes is in the east and southeast. Heavy rains brought by the summer monsoons make the north coast tropical. Large stretches of the coastline are unbroken and without harbors. On the northeast, the largest known coral reef, the Great Barrier Reef, further handicaps navigators. The only important rivers, the Murray and the Darling, lie just west of the mountains. Each is more than a thousand miles long, but they are very shallow. Some traffic is carried, however, by flat-bottomed boats.



Australian News & Information Bureau

The distances from Sydney to San Francisco and London are great, yet the continent "down under" has firmer ties with North America than with its neighboring lands of the East.

The dark-skinned aborigines who inhabited the region at the time of the colonists' arrival, lived on a Stone Age level. They wore no clothes and their only weapons were made of stone and wood, but they were good at hunting the strange animals which dwell in the region, and they had traveled far out to sea in their primitive canoes. About fifty thousand of their descendants are numbered among Australia's present population of seven millions. Since Australia is about the size of the United States and the population is roughly equal to that of New York City, it can be seen that the continent is very sparsely populated. Moreover, about half the inhabitants dwell in a few large cities on the southeastern seaboard. Sydney and Melbourne have a population of one million each. Most Australians are of British descent. They have been

determined to keep Asiatics out of Australia and consequently there is a lack of cheap labor. But the general standard of living is high. Their separation from the other parts of the world has made Australians independent in thought and action; they have thrown off the fetters of tradition.

Australia's great distance from Europe influenced her economy. The sheep industry became the most important because wool could be transported over the twelve thousand miles of ocean to England without damage and because grasslands were available for forage. A native saltbush proved to be particularly good for pasturing the Merino type of sheep, which produces the finest wool. The best lands are the rolling surfaces of the "back slopes" of the mountains, which are drier than the coast. Sometimes droughts



Australian News & Information Bureau

In many ways Australia's vast expanses are like the American West. In 1851 a gold rush speeded the development of progress which was begun so late in Australia. Its railroads are few; its coastlines extend more than twelve thousand miles.

cause widespread starvation of both sheep and cattle; though in late years railroads have been constructed over which the sheep can be moved to better-watered ranges when danger threatens. Australia came to supply about one-fourth the world's wool needs. Since the development of refrigerating facilities, considerable quantities of Australian mutton and beef have been shipped to the English market. Dairying is fairly important.

The leading crop is wheat. It is grown chiefly in the southeast, though the grain is adaptable to a small area in the southwest. Sheep and wheat farming are often carried on together. Corn, oats, and barley are grown on a lesser scale. The total area tilled is small, equaling that of Iowa. In the tropical region, sugar, cotton, bananas, pineapples, and sugar are produced. Some grapes and other fruits are grown in the south and west.

Lack of water has been a handicap to Australia. The situation has been relieved to some degree by the

drilling of artesian wells. Australia has had another problem which is peculiar to it. It is the only nation ever seriously menaced by rabbits. After their introduction from England, they multiplied in a stupendous fashion, stripping the land until some inhabitants were actually forced to abandon their homes.

Australia experienced a gold rush shortly after the one to California. Nuggets weighing up to five pounds were discovered. But the lodes are no longer rich. Useful minerals produced are copper, lead, zinc, silver, and iron. There is an abundance of coal; Australia has deposits greater than those of the rest of the Southern Hemisphere combined. The wealthiest deposits are near Sydney. Manufacturing industries include flour-milling, meat-packing, wool-processing, and the making of machinery.

Transportation is made more difficult by the fact that the productive regions of the east and west are separated by a vast unproductive territory. There is only one transcontinental railroad. The rivers are of



Tasmania and New Zealand

New Zealand, a British Dominion, is about two-thirds the size of California. It is in a southern latitude in a region that, as distance goes, compares with the stretch from Los Angeles to Tacoma, Washington. Its climate and agriculture resemble those of Spain and Italy. Tasmania is about five-sixths the size of Maine and nearly the same distance from the Equator.

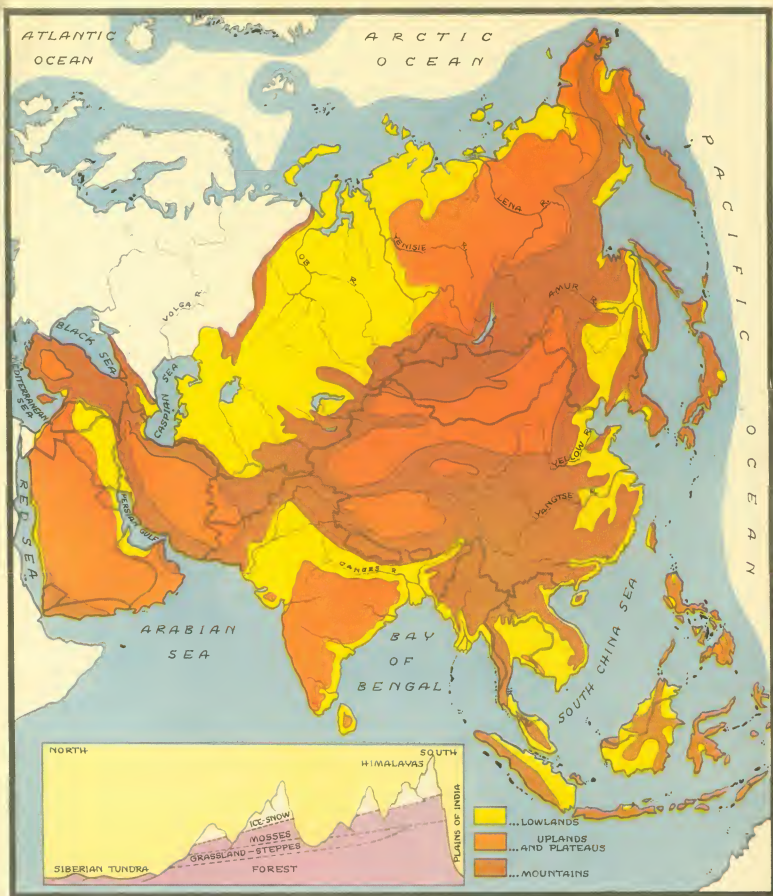
little account for traffic. The motor road system is only about one-sixth as extensive as that of the United States. Airplane traffic has become important, and continued development of it, particularly of air freight, will be of great value to Australia, in drawing the land "down under" closer to the great industrial areas of the earth.

Tasmania, off the southern coast of Australia, was first colonized by lawbreakers sent from New South Wales; thus it became a penal colony for what had originally been a penal colony. Most of the island is bleak tableland surrounded by mountains. There are good grazing stretches in the more open eastern region. The climate is favorable for many crops, particularly fruit. The mountains contain considerable mineral wealth, and good waterpower has been useful in the establishment of some industries.

On the map, New Zealand appears to consist of two small islands. Actually, the area is larger than

that of the British Isles, from which New Zealand is almost directly across the world. But the population of the dominion is only three per cent of that of the mother country. The native Maoris are intelligent and energetic; most New Zealanders are, however, of British descent. Settlement by British colonists began in 1840, in the same year that British sovereignty was proclaimed.

Alp-like New Zealand is beautiful and the warm climate is healthful. The standard of living is high. The great stretches of pastureland and humid climate have permitted a profitable pastoral economy; live-stock products comprise most of the exports. Dairying and poultry raising are important. A product called Kauri gum is shipped in large quantities to the United States, where it is used in the manufacture of varnish. Gold and silver are the most important metals found, and coal is plentiful.



Asia

Asia is the continent of endless plains, rivers, plateaus, and mountain ranges.



Netherlands Information Bureau

Asia is the home of half the people of the world. The problem of daily bread is ever present despite the almost inexhaustible resources of the continent.

THE AVERAGE American became aware of his country's close tie with Asia only after the outbreak of World War II. Loss of the tin, rubber, and silk of the East caused him, he found, considerable inconvenience. The German invasion of Russia, the struggle for oil in Iraq and Iran, and the Japanese conquests imprinted Asiatic place-names firmly in his mind.

The continent of Asia—though technically it is not a continent by itself, since Europe is part of the same land mass—dwarfs all others. The vast region is a land of contrasts—crowded cities and empty plains; ice fields and deserts; the highest mountains in the world and Dead Sea area 1300 feet below sea level. It is the cradle of the early civilizations and the home of over half the population of the world. In recent centuries it has fallen behind the Western world. All the major religions—Christianity, Buddhism, and Mohammedanism—were born in Asia.

Origin of the name, though scholars have argued about it for centuries, remains shrouded in mystery.

Much is known, however, of the early civilizations, and their spread to Europe has been traced. Few European races are without some strain of Asiatic blood left by the Mongolian hordes who swept across Europe, plundering, destroying, and sometimes settling. Food-stuffs now characteristic of Europe—olives, figs, almonds, apricots—were transplanted from Asia. Sheep, horses, cattle, dogs, cats, and other domestic animals were indigenous to the region. Mathematics and astronomy, with the mariners' instruments which resulted, had their origin here.

Though there are numerous excellent harbors, Asia's coastline is not nearly so irregular and deeply cut as that of Europe; it is, however, more indented than Africa and thus has better ports. Below the icy regions of North Siberia is a great forest plain stretching almost across the continent. South of this is the central section, a plateau and mountain region of unfertile, mostly dry land with wide extremes of heat and cold. The seasonal winds from the south break on the



Canadian Pacific Steamship Lines

Modern transportations and modern systems of communications, industrialization and the airplane, are at last beginning to make inroads into the great Asiatic continent and to change age-old ways of the East.

high Himalayas; the rain in the cloud masses they carry is thus released, keeping the region south of the mountains well supplied with moisture—though if the winds are off schedule havoc is played with the crops, chiefly rice, on which millions depend for food. In Eastern Asia, both the mountainous and the level land are fertile; great rivers, such as the central portion of the continent lacks, drain it. The central region may have lost considerable of its productiveness during the last few centuries. Scientists think the lakes and rivers have been drying up.

Western civilization has borrowed heavily from Asia. At the middle of the seventeenth century, the West belatedly started paying back. The British opened up China; the American Commodore Perry made his famous call on Japan. The Orient soon began to change. It loosened the shackles of the past and adopted many of the ideas of modern machine civilization.

Asia was not, like Europe, divided into small nations, and it is without those natural barriers which

have helped to prevent unity in South America and Africa. The north and central portions of Asia are held by the U.S.S.R., China, and Japan. The south and southwest, including India, have been dominated largely by Britain, either directly or through spheres of influence. Germany, France, the United States, Russia, and the Dutch have also secured territory, naval bases, or economic concessions in various Asiatic countries.

Japan, off the coast, found its relation to the mainland somewhat comparable to that of England's relation to the European continent. She developed into a modern industrial nation much more rapidly than did other Asiatic nations. The Japanese saw great riches lying around her—coal and iron in China, tin and rubber in Malaya and the Dutch East Indies; and markets everywhere. Being a militaristic people, they set out to seize them. Japan demanded "Asia for the Asiatics"—by which she meant Asia for the Japanese. The rest of the Asiatics were not in agreement with that aim.

Ewing Galloway





Burma, Malaya, Thailand, Indo-China

Where jungle, mountain, and ocean meet as the ranges of southeastern Asia, extending along the twisted arm of the Malay Peninsula, are finally swallowed up by the sea. Where man must wage an eternal struggle with the jungle to take the soil's great riches.

INDO-CHINA can be divided into four parts: Burma, the Malay States, Thailand (formerly Siam), and French Indo-China. Southeastern Asia or Farther India would perhaps be more appropriate names for this region because the name Indo-China has so frequently been given to the area which has been part of the French colonial empire.

Many parts of the region are tropical gardens, with high temperatures and heavy rainfall. The forest-cov-

ered mountains and lowland jungles are thinly populated.

Indo-China is immensely wealthy in natural resources. It supplies the major part of the world's tin. Its wet, hot climate is most suitable for the cultivation of rubber; the production of rubber was so successful in this region, because of favorable physical and economic factors, that for many years it was virtually abandoned elsewhere in the world.



China

A country that dominated the culture of Asia for centuries, united again under stress of war and advancing rapidly in industrial strength.

FOR NEARLY five thousand years the Chinese had little or no contact with peoples their equal in civilization. Centuries before the coming of Christ, they invented the compass, printing, and gunpowder. They extended their boundaries by military conquest until halted by impassable barriers of desert, mountains and high plateaus, and the sea. Then, in 211 B.C., they built the two-thousand-mile Great Wall and remained isolated, little known to the outside world, until the middle of



Ewing Galloway

For centuries after the building of the Great Wall, China was cut off from the rest of Asia. A land of floods and famine, of barren, rugged country as well as of great productive regions and unnumbered populations. The pace of the modern world is today overtaking China and it is swiftly undergoing incredible changes.

the nineteenth century. The teachings of Confucius as well as China's geographical isolation helped to hold China back for centuries. In 1911 the Manchu emperor was overthrown, a republic was established, and China progressed more rapidly. But local warlords constantly fought the central government, and outside powers controlled most of the trade.

China is a vast country both in area and population. But, though most of the population gets a living from agriculture, only a relatively small portion of the land is fertile. The extensive plains are in the northern and central regions, though there is one fertile lowland district in the south. The rest of China is mountainous. Life is centered in the valleys of three great rivers: the Yangtze in South China; the Hwang-Ho, or Yellow

River, in North China; the Si-Kiang, near the southern coast. Rice is the important food crop, while tea, cotton, soybeans, wheat, and vegetables are grown extensively. The Chinese are good farmers, as they must be to gain a livelihood from the tiny farms, which average only about three and one-half acres in size. Because of lack of pasture or forage-growing land, there is little livestock. The mulberry plant, used to feed the silkworm, is cultivated.

Extensive coal deposits of good quality have been discovered in China. Iron ore is available, but apparently not in such quantity as to make a great steel industry possible. So far, no petroleum supplies of consequence have been discovered. China has some tin and she is an important producer of tungsten and



China, although only one-third larger than the United States in area, is many times larger in terms of time-travel by land. Waterways are the key to transportation in China, since highways and railroads are few.

Ewing Galloway

antimony. Textiles are the most important of China's limited manufactures.

Lack of transportation facilities has been a major factor in retarding China's development. There are almost no motor roads worthy of the name. There are less than seven thousand miles of railroad in China. Only one river, the Yangtze, is navigable by large ships; it is the nation's main highway. Most goods in China are still carried on pack animals, in wheelbarrows, or on the backs of humans.

Since 1931 half China's territory has been whittled away in one manner or another. Japan seized Manchuria, Jehol Province, and the eastern portion of Mongolia. The remainder of Mongolia, Outer Mongolia, withdrew and is under Russian influence, with a government patterned after that of Russia. Another group of five provinces, near Manchuria, withdrew and set up a government headed by a Japanese puppet. Sinkiang, although nominally a part of China, has an independent government.

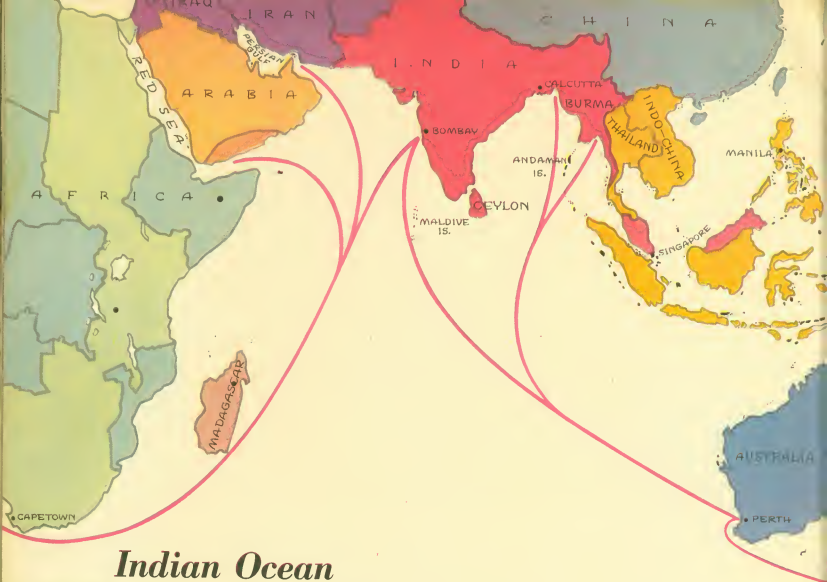
Commercial nations look upon China as one of the great markets of the future. Japan sees China as her own private domain. She wanted her iron, coal, cotton, and foodstuffs, and she wanted to sell manufactured goods to the Chinese. Even without conquest, Japan was in a good commercial position because of her

nearness to China.

Given freedom, China will be able to develop her own resources, but it will take time and she will need help. Labor must be used to better advantage and the living standard will have to be raised before China becomes a great market.

Canadian Pacific Steamship Lines





The great sea lanes from Europe to India run through the Indian Ocean, the world's third largest body of water. Air routes by land and across the water are changing the nature of its role in trade and communications.

ONE of the first things that impresses any student of geography is the strenuous and heroic effort made by early navigators to find a short cut from the Mediterranean to India. Thousands of miles of unknown ocean were traversed. One navigator, Magellan, circumnavigated the globe. Christopher Columbus discovered America. Yet less than a hundred miles of land—the Isthmus of Suez—separated European waters from a direct outlet on the Indian Ocean, the world's third largest body of water. Almost four centuries later—in 1869—the Suez Canal was completed, realizing at last the short cut to India. Until that time ships had traveled thousands of miles around the tip of Africa to reach the enormous wealth of the East. At first they went for spices; later for food, rubber, tin, and oil.

Portugal was the first European nation to gain a foothold in the trade of the region. A Portuguese vessel entered the Indian Ocean in 1486. The Arabs, after

eliminating the Chinese, had controlled this body of water; now the Portuguese ousted the Arabs. With its East Indian trade, Portugal rose from a minor to a major power. Spain then cut out Portugal. Great Britain, after destroying the Spanish Armada, moved in on the countries bordering the Indian Ocean. France was interested; so were the Dutch. The English and Dutch technique, which turned out to be the most effective, was to organize great companies who sent out fleets of merchant ships which were equipped also for battle. India and Australia were acquired by Britain, the East Indies by the Dutch. France got French Indo-China and Madagascar.

In the Indian Ocean lies the island of Madagascar which, though fifth largest in the world, was little known until the British attacked and wrested it from the French Vichy government in 1942.



India

Once the goal of the western world's explorers and merchants, now another awakening region of the East. With fabulous wealth, countless millions of inhabitants, India has lately begun to play more vital and influential roles in trade and industry.

FOR CENTURIES the sub-continent of India was the magnet that drew the merchants of Europe in search of fortune, and the honor of discovering a short cut to the rich land stirred the ambitions of navigators in the early days of ocean shipping.

The people of India have not ruled themselves for many long centuries. The original inhabitants were a dark-skinned people called Dravidians. Fairer-skinned northerners, whose language was Sanskrit, overran the country as early as 1500 B.C. In their lan-



Indian Official Photograph

New ways for old in India, as the end of the handicraft age looms.

guage Aryan was the word for high-born and they called themselves Aryan. In a later century the Persians invaded India; then came the Greeks; while northern Asiatic vandals of every description continued to take their turn at plundering the region. Finally, the Portuguese and the Dutch, following the explorers, settled along the coasts. Eventually, they yielded to the British who, since the beginning of the seventeenth century, have steadily increased their control. In 1858 the King of England became the Emperor of India.

India is a great, crowded, and complex country. Two and one-half times the population of the United States is contained in an area only one-half the size. Many languages are spoken, the chief of which is Hindustani. Most of the people of India are followers of the Hindu religion, but there are about eighty million Moslems, as well as small religious minorities of Sikhs, Parsis, Christians, Buddhists, and Jains. The caste system—strange to the Western mind—still rules in India.

At the beginning of World War II, India was made up of eleven British-controlled provinces—which comprise three-fifths of the total area, and some five hundred states ruled by Indian potentates who lean upon the advice of the British. Topographically, India is divided as follows: the Himalayas and other moun-

tain in the north, northeast, and northwest; the broad valleys of the Indus, Ganges, and Brahmaputra rivers south of the mountains; and the peninsular plateau called the Deccan. The island of Ceylon "floats in the blue" at the tip of the mainland. The fertile Ganges Basin is by far the most densely populated area of all India.

The welfare of India, since about nine out of ten of the inhabitants are farmers or herders, depends on the weather and the vagaries of the monsoon winds. If the winds delay the rain, or bring too much, the crops are ruined. Millions come to the verge of starvation, and many die. The British, who have drawn great wealth from India, and the modern Indian leaders have done much to help by developing systems of irrigation and agricultural science. Railroads have made possible the importation of foodstuffs during famine years.

Religious customs and a tendency to cling to ancient and obsolete methods of tilling the soil have caused unnecessary hunger among India's masses. India has three times as many cattle as the United States. But the devout Hindu will not kill an animal for food because that would conflict with his religious faith, while the Mohammedans hesitate to butcher a cow lest it cause a riot of the Hindus. Moreover, the Indians make



Indian Official Photograph

There are still more than 700,000 villages in agricultural India, but urbanization and industrialization are changing the traditional village life.



little use of cow's milk, preferring that of water buffaloes and goats. Cattle are used chiefly for draft purposes, and often they become a burden to their owners. The soil, distributed in tiny plots, is cultivated with the crudest of instruments.

The major crop is rice. About a third of the cultivated land is devoted to it. The great rice fields are in the Ganges and Brahmaputra valleys and on the edges of the Deccan. In the dry lands, wheat, sorghum, and millet are grown. Sugar is an important staple of the Indian diet; the country grows more sugar cane than any other land, but it is consumed at home and there is little for export. Cotton, grown in India since ancient times, is the leading export; the little cash the farmer gets is likely to come from his small acreage of cotton. The jute grown on the Ganges delta goes into the gunnysacks of the world; the growing of jute requires so much toil that farmers elsewhere hesitate to make a crop of it. Other crops are tea, vegetables, and oil seeds such as sesamum, peanuts, flaxseed, and rapeseed.

India requires little fuel and that is fortunate, for its vast reserves of coal have not been developed. Facilities for waterpower are present, but they are of little importance. In recent years considerable deposits of iron ore have been discovered, and, though there is a possibility of mining in open pits, not much has been

done about it. But the manganese mines of the plateau regions are worked extensively; next to Russia, India is the world's principal source of manganese.

Textiles are the chief manufacture, though mostly the cheaper grades of cloth are produced. The total is not enough for home needs. The industrialization of India has lately begun, and at the same time its foreign trade has been greatly stimulated.

India has always been famous for its fabulous cities, including Calcutta, Bombay, Benares on the Ganges, the holy city to which thousands travel yearly as pilgrims.

Although India has never in modern times been united under the rule of her own people, there have been many movements directed towards unity and independence. In the twentieth century, mass movements, such as the All India Congress under the leadership of Jawaharlal Nehru and Mohandas Gandhi, have assumed great significance.

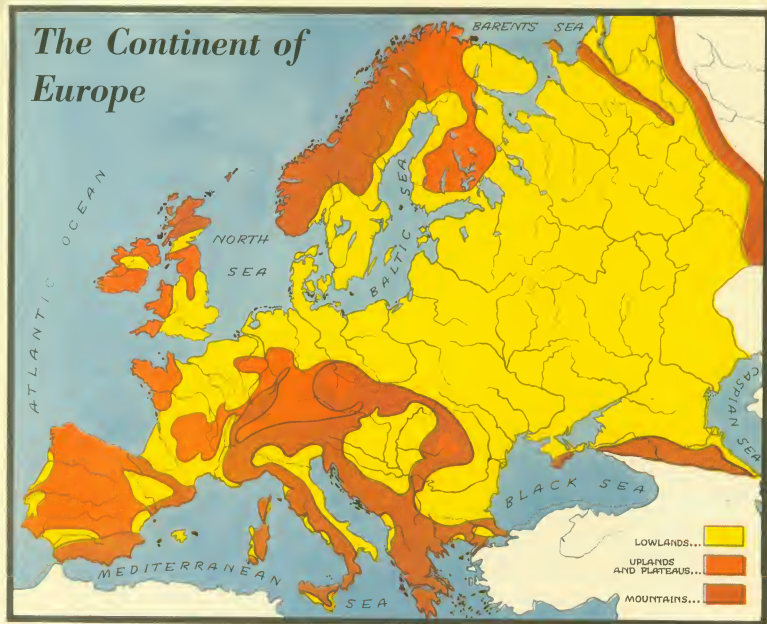
In spite of the complexity of the Indian scene, and the economic misery of many of its people, India has produced a great culture and great achievements in art, literature, and philosophy. It is, as it has always been, one of the most naturally wealthy and interesting lands of the world.



Atlantic Ocean

The Atlantic Ocean for long ages spread an impassable barrier between two hemispheres. Today it is little more than the broad, curving river it seems to be on the globe. It is the busiest thoroughfare in the world. Its trade routes are an invisible web, drawing four continents ever closer as speed comes into its own.

The Continent of Europe



A land of little nations with large ambitions. Geography conspired to make this tapering western end of Asia's huge land-mass a maritime continent, with its long and deeply indented coastlines, good harbors, broad fertile plains, and mineral wealth.

To a geographer, Europe is not a separate continent but a peninsular extension of the vast Eurasian land mass. The only natural boundaries between the so-called continents of Europe and Asia are the low Ural Mountains, the Caspian Sea, the Caucasus, and the Black Sea. On the large European peninsula are smaller peninsulas created by the Baltic, Black, and Mediterranean Seas. Thus the ocean is admitted into the very heart of the continent; the coastline is twice as long as that of any equal area of the earth.



Finnish Information Center

European supremacy—ninety per cent of the earth is governed by Europeans or their descendants—can be traced to the wealth of fine harbors on the irregular coastline, for discoveries, empires, and trade have in the past fallen to those able to make the best use of ships. Europe has fine rivers—the Rhone, Rhine, Danube, and Volga are among the most important—and their value is enhanced by canals. Great engineering feats have been accomplished in bringing every means of communication to the continent.

Europe had other advantages which helped to make it dominant. Its soil is generally fertile and rainfall is sufficient—though because of the density of the population it cannot produce enough for an adequate diet for every one. Nearly all the continent is in the temperate zone, and the surrounding waters further moderate temperature changes. Thus conditions are ideal for hard and continuous work. But most important of all is Europe's endowment of coal and iron, so essential to industrial advance. The presence of these elements in a great central belt explains the leadership of

Europe covers less than one-fourth the area of North and South America but has twice the population. It produces more foodstuffs than the two continents together but still must import more food than all the other continents combined.

Great Britain, France, Belgium, and Germany in manufacturing.

The density of the population facilitated progress through exchange of ideas and the concentration of industry. But it resulted also in jealousies and armed conflict. Hitler shouted for "*lebensraum*" ("living space") until the term stuck in the modern mind; but the history of Europe has been a struggle between nations for expansion. Colonies have been sought for relief of the press of population as well as for natural resources and markets.

Europe is divided into three economic regions: 1. North Sea countries; 2. Mediterranean countries; 3. Eastern Europe. The first have become more important in modern industrial times because of greater deposits of iron and coal, more good harbors, and coastal plains which make inland transportation easy. The Mediterranean countries declined as navigation of the Atlantic Ocean became more important than that of the Mediterranean Sea, because the mountainous coast does not permit ready access to the interiors, and for lack of minerals. Eastern Europe, a plains region inhabited almost entirely by Slavs, is chiefly agricultural.

Europe's future raises many questions. Other lands of vast wealth have been developed or are ready for exploitation. The importance of navies has lessened with the growth of airpower. The world has seen shifts of domination by geographical regions before. It may be seeing another.



The Baltic Countries

In the countries of northwestern Europe, the riches of the forest lands and of the sea are all important. Lumbering, fishing and other maritime trades, dairying, and mining are the principal occupations.



Finnish Information Center

THE BALTIC SEA has been to Northern Europe what the Mediterranean has been to the south—a water highway to the outside world. That is why the Skagerrak and the Kattegat—embattled narrows at the entrance to the North Sea—have recently become household words. The Baltic is a vital sea lane for Germany; so Norway and Denmark, guards of the passage, paid the price to superior strength. The Baltic is also important to Russia as a passage to Leningrad.

Altogether, nine nations find the Baltic Sea vital to their welfare: Sweden, Finland, Estonia, Latvia, Lithuania, Denmark, Germany, Poland, and Russia. For centuries boundaries have undergone change in the struggle for control of this great inland sea which leads to the ocean trade routes of the world.

Superlative hardihood and intelligence have been necessary for conquering the northernmost regions. The peninsulas of Scandinavia and Finland are a land of jagged mountains, fjords (glacial, deepened valleys), and short swift rivers. On the Swedish side, the terrain is a series of steps down to the Baltic Sea. Sweden is the richest in farmland, forests, and mineral resources. For these reasons its population equals that of Norway and Denmark combined. Half the Swedes are farmers; yet because the land is not very fertile they are unable to produce enough food for

the nation's own use. Sweden's greatest wealth is iron ore, which is of the finest found in Europe. Wood pulp is exported, and the manufacture of matches is an important industry.

Norway's only important industry is fishing. The Norwegians have always been a seafaring race; as long ago as the Middle Ages they traded with Constantinople by way of Russian rivers, and the old Vikings were greatly feared in Europe. Much of Norway is in the extreme Arctic. Yet, because the warm Gulf Stream washes its shores, Norway has ports open the year round, while more southern ports on the Baltic are ice-bound in winter.

Finland means fen, or swamp land, and one-third of its area is covered with lakes and swamps. Much of the country is forested and rugged, with a wealth of waterpower. Less than ten per cent is cultivated or pastureland. The sturdy Finns have made the most of rather limited natural resources and are a highly cultured people.

Denmark, once large and powerful, has been reduced in modern times to a buffer state. Made up of islands and the Jutland Peninsula, it is a low country of sandy soil. The people, mostly farmers, have gained a considerable degree of financial security; they are, like other Scandinavians, good co-operators. Den-



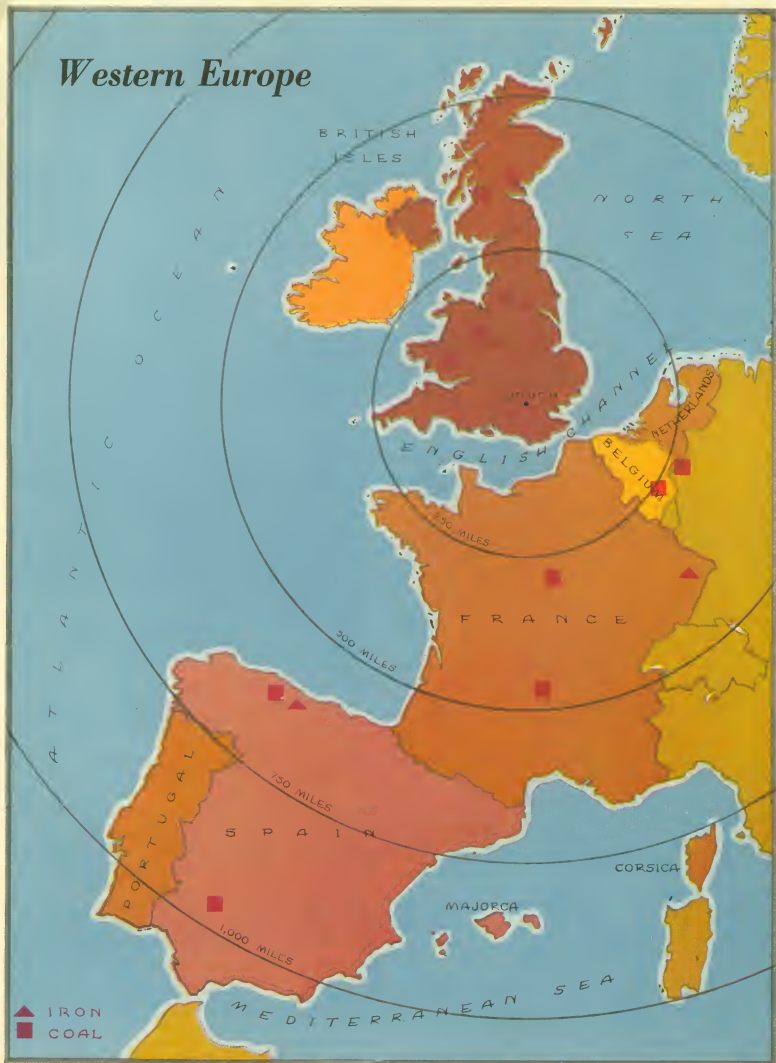
Butting peninsula and confined inland sea have shaped the destinies and history of ten nations—victims of a geographical situation they have long sought to overcome.

mark has supplied the surrounding countries with the choicest dairy foods.

Estonia, Latvia, and Lithuania are comparatively new nations, having been established after World War I. The swampy and forest-covered land is poor. These

are today countries less desired for themselves than for the outlet they provide to the sea on which they border. The people, less advanced than those of the Scandinavian countries, must struggle hard for a livelihood.

Western Europe





French Information Center



Western Europe

For centuries the English Channel was an invulnerable moat, but then came the airplane. London, ninety air-miles from Calais, was only twenty minutes from Europe by bomber.

AN UNUSUAL study in contrasts is offered by Western Europe. Those countries which border on the North Sea have grown steadily in importance; nations to the south have declined. Yet all have extensive coastlines and therefore access to foreign trade. Lack of coal and iron needed in heavy industry is, in part, responsible for the failure of the southern nations to maintain the pace of modern civilization; indolence resulting from the warmer climate has also been a factor.

Britain has shown the most remarkable growth of any European nation. Here the industrial revolution first flowered. Great supplies of coal and iron permitted rapid expansion in this field. The fact that Britain is an island kingdom (it is smaller than the states of New York and Pennsylvania) has been a strength and a weakness. It is less vulnerable to attack than mainland nations. But it is cut off from the land routes of Europe. As a consequence, Britain's policy has been to form alliances with other European powers to prevent any one nation from dominating the continent. To protect her empire, which embraces almost a quarter of the earth, she has maintained a navy designed to rule the seas. The extent to which the airplane threatens this naval supremacy remains to be seen.

Like Britain, France has a long coastline, a temperate climate, and abundant iron and coal. France's greater size has resulted in a more important agricultural economy—more than a third of the people are engaged in farming—but her greater military vul-

nerability and fewer rich colonies have forced her to more diversity of manufacture. France has developed in the direction of artistic skills and luxury products.

Belgium and the Netherlands have been unfortunate in that they lie between France and Germany. When the great powers go to war, these little countries suffer innocently because of their location. Both face the North Sea; both are low countries needing dikes to keep out the sea, though the Netherlands have by far the greatest problem in this respect. Belgium, the most densely populated country in the world, wastes not the slightest space. Rich in coal and iron, the country is highly industrialized; metals and textiles are the chief manufactures. Agricultural pursuits are more important to the Netherlands, though presence of rich coal mines have quickened the growth of industry. Fishing is important. At the beginning of World War II the Dutch colonies totaled fifty times the area of the motherland.

Once Spain and Portugal, south of France on the Iberian Peninsula, counted most of South America among their colonial possessions. Today both countries are poor. Each depends largely on agriculture for a livelihood, though Spain has mineral wealth which has been exploited, largely under foreign direction, during the last three decades. Portugal's chief products are grain, wine, and cork. Sheep raising is important on Spain's great arid tableland. Extensive orchards are cultivated. The civil war which lasted from 1936 to 1939 divided and further impoverished Spain.



Swiss Federal Railroads

Central Europe

Land-locked, or confined to inland water routes, nation after nation of Central Europe has thrust beyond its restricting frontiers in past centuries to invade and conquer surrounding territory.

CENTRAL EUROPE has labored under handicaps imposed by geography in having to depend upon rivers and inland seas for access to the oceans. Differences of race, language, and religion have created other problems. Long before nations or nationalism were thought of this great region was divided into armed camps. When states appeared, they were often without the benefit of natural geographical boundaries such as rivers and mountains.

In the Middle Ages Germany consisted of three hundred and sixty-two independent states; in 1871 there remained twenty-five. After the defeat of France in that year, these were welded into a strong empire. During the next forty-five years Germany grew increasingly powerful through industrialization, spread of education, and emphasis on science. It had plentiful supplies of coal, iron, and some other metals. The German soil is not naturally fertile, but careful cultivation forced it to yield large crops—though not enough to feed the large population. Scientific forestry methods permitted the taking of great supplies of lumber and pulp without destroying the forests.

Centrally located, with great navigable rivers and two open ports—Bremen and Hamburg—on the north, Germany was in a strong geographical position. But she feared that other nations would form an encircling alliance and overwhelm her. This was, in part, responsible for her extreme militarism. Ambitious rulers thought Germany entitled to rich natural resources which lay beyond her borders and tried to seize them.

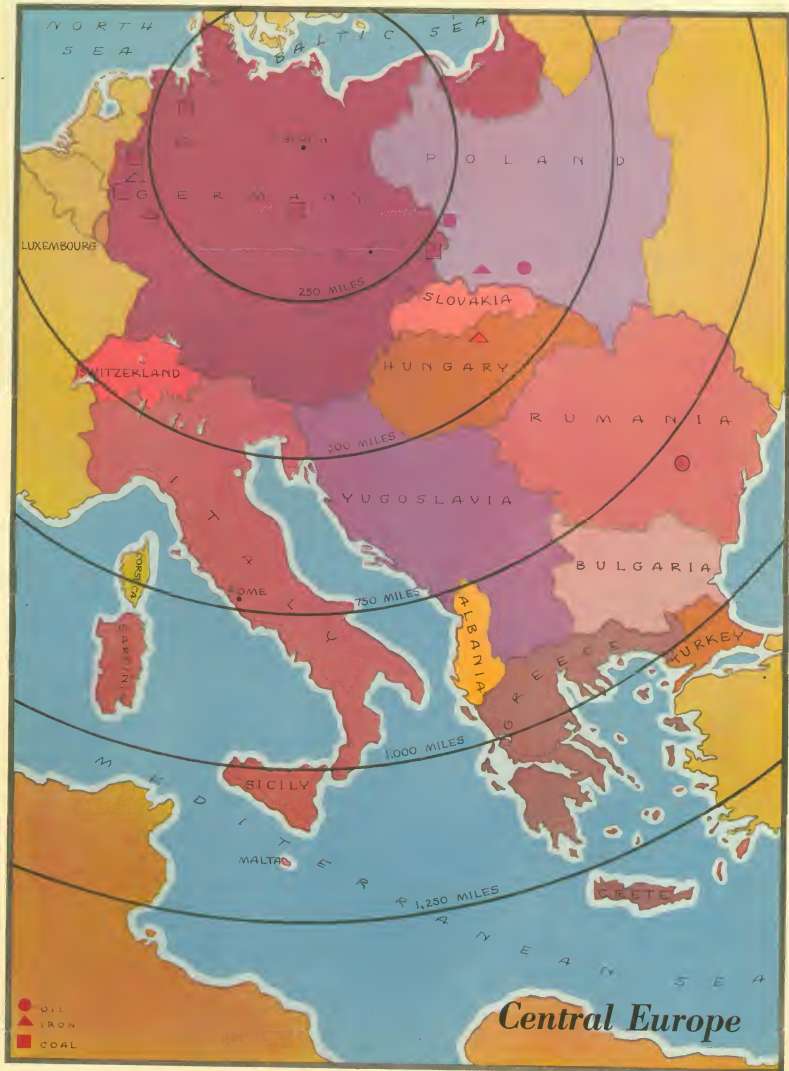
Poland, formerly a great nation, suffered the fate feared by Germany. Without strong natural frontiers, and surrounded by warring countries, she has been

divided and redivided as more powerful nations sought her minerals, forests, and farmlands. Its mixture of hostile races and its failure to keep pace with world changes have helped to make it an easy victim. In Central Europe nations have either conquered or been conquered.

The southeastern nations—Czechoslovakia, Hungary, Austria, and the countries of the Balkans—have suffered in the same way. The great Austro-Hungarian Empire, arbitrarily assembled and racially jumbled, was not successful, and its economic and racial problems were not ended by the marking out of new boundaries after World War I.

Switzerland and Italy have suffered less from invasion because of fewer natural resources and the high mountains that separate them from Northern Europe. Switzerland is an example of what an industrious people can accomplish when not interrupted by wars. The beautiful mountains yield almost no metals; the Swiss are united in neither language nor religion. Yet they have made the most of their limited opportunities. Fine grazing land has given rise to a great dairy industry, and skilled workers have made delicate Swiss machinery and fine fabrics world famous.

Italy, master of the civilized world in ancient times, declined in importance when the Mediterranean ceased to be the chief water avenue of commerce. Italy lacks the mineral wealth, particularly coal, necessary to a great industrial nation. Nearly half the population depends on agricultural pursuits for a livelihood. Textiles are the most important of the manufactures. Her recent dream of empire has brought only suffering and privation to the people.



U.S.S.R.



Russia has always suffered from the lack of access to the open sea. Despite immense efforts to create usable sea lanes in the Arctic, it is unlikely that Russia can meet her great needs without all-year ports on other coasts.



THE U.S.S.R. is the world's largest continuous area of land under single rule. Stretching across two continents from the Pacific Ocean to the Gulf of Finland (Baltic Sea), it comprises one-sixth of the earth's land surface. Only the scattered British Empire surpasses it in size. In 1917 the Russian people overthrew the Czar. During the last two decades the country has made great strides in changing from a Middle Ages to a modern machine civilization. To understand the U.S.S.R. these two things—the vast expanses and the effort to bridge centuries in a few short years—must be borne in mind.

The three main divisions of the country are Siberia, Russian Central Asia, and European Russia. Siberia is larger than all of Europe, but much of it is extremely cold. All Siberia is inhabited by only a few million people who make a poor living by trapping and fishing. Life is much like that in Alaska, which is separated from Siberia by the narrow Bering Strait. The Soviet government has tried to put Eastern Siberia on a self-sufficient war economy; new railroads, highways, and air bases are being constructed as rapidly as possible.

Russian Central Asia is an extensive region of low rainfall, steppes, and desert. It was one of the more

recent additions to the Russian empire and few of its people are Russians. The nomad tribes roaming the steppes region are principally herders.

Ninety per cent of the people live in European Russia. The best land is in the Ukraine, the only large area in Europe which has in recent years produced grain in sufficient quantity for export. Eighty per cent of all Russians till the soil for a living. Today most of the farming is communal—tractors can go in a straight line mile after mile without coming to the end of the field—and all is under government control. But in many places the methods are still primitive because of lack of sufficient modern equipment. Improved methods of farming would make the Ukraine one of the most productive regions of the world. In the Ukraine, too, are great coal and oil fields. It is better served by the railroads and is nearer to the ports than most sections of the country. Consequently the Ukraine has long been inviting to aggressor nations.

Elsewhere in the U.S.S.R. are great riches, though generally less developed. In Asiatic Russia are the largest timber stands on earth. In Western Russia and the Urals are coal, iron, platinum, manganese (essen-



Sovfoto

Soviet Russia

The collective farms of Russia have changed the face of its great agricultural expanses, the only extensive region in Europe capable of producing a surplus of grain.

tial in making steel), nickel, and copper deposits. In the Caucasus are famous oil fields.

The greatest economic problem in Russia is transportation, and it always has been. The U.S.S.R. has the second largest railway mileage in the world, but it is inadequate. Extensive regions are almost entirely lacking in means of transportation. There is little open rock available for road building. The best communication routes are by water. The Don, Volga, and Dnieper are the great rivers, immensely valuable for interior transportation. In some places they have been made even more useful by systems of canals.

Since the time of Peter the Great, Russia has sought adequate outlet to the sea. She fought Sweden for Baltic ports. She warred with Turkey for Black Sea bases. She pressed east for an opening on the Pacific. Yet today Russia is still largely blocked. The European exits for which she fought are guarded by other powers. Only one or two of her European ports are

open all year, and these are far north, away from much-traveled sea routes. On the Pacific, Vladivostok is kept open the year round only with extreme difficulty.

It is impossible to picture a representative Russian among the many races and tongues. They run from the Eskimo of the Arctic Circle, through the various Asiatic strains in the south, to the Slavs of Europe. Before the Revolution illiteracy was general. The government has succeeded to a considerable degree in overcoming this. Manufacturing was only slightly developed. Under the Five-Year Plans production increased by leaps and bounds. But the ground to be covered was very great. The standard of living rose, but at the outbreak of World War II it had not reached the level of that of most Western nations. Today Russia is divided into a number of autonomous republics, each with its separate government for local affairs. The capital of the nation is Moscow.



Tourist Development Association of Egypt

The Mediterranean Sea

The Mediterranean Sea has probably had a greater influence on history than any other body of water. Its mountainous coastline has been an important factor in its loss of importance. The ancient world depended upon it for trade and communications, while the modern world has made of it an important sea route to Asia and the oil fields of the Near and Middle East.

THE MEDITERRANEAN Sea's influence on history has probably been greater than that of any other body of water. On its shores flourished the ancient civilizations of Greece, Crete, Assyria, Phoenicia, Egypt, and Rome. They depended upon it for trade and they fought for mastery of it. The old Mediterranean powers declined in importance, but in modern world politics the sea continues to play a major role.

The Mediterranean is vital to Britain as a water passage to Africa, India, and the East. Though at first opposed to France's construction of the Suez Canal, Britain, after the canal's completion in 1869, secured control of it. She has shaped her foreign policy and fought wars to maintain her might in the Mediterranean. Italy's Mussolini shouted the slogan, "Mare Nostrum" ("Our Sea"), because for Italy the Mediterranean is the chief entrance to Europe. With Gibraltar and Suez closed to her, Italy is in a position similar to land-locked Switzerland. Thus Italy has always allied herself with that power she thought most likely

to dominate Europe. France needs the Mediterranean for shipping; so does Spain. Germany has long coveted the Suez Canal. The Balkan countries and Turkey, commanding the passage from the Mediterranean to the Black Sea, have felt the impact of the struggle between the great powers.

The spread of civilization away from the Mediterranean began with the opening of ocean trade routes. By the beginning of the sixteenth century, ships had begun to move around the Cape of Good Hope. For the first time boats returned empty to Venice from Alexandria, and Venetians commenced to talk of a canal through the Isthmus of Suez. Other elements tended to make permanent the shift of trade to the countries above the Alps.

Whereas the North Sea is surrounded by plains and navigable rivers, the Mediterranean's coast is largely mountainous. This made transportation of bulky materials away from the sea difficult. The mild climate was of extreme importance in earlier times; hot, dry



The Mediterranean Sea

Its ancient glory faded; its peacetime importance reduced to that of a traffic lane to the East, the Mediterranean still is an area of great strategic value.

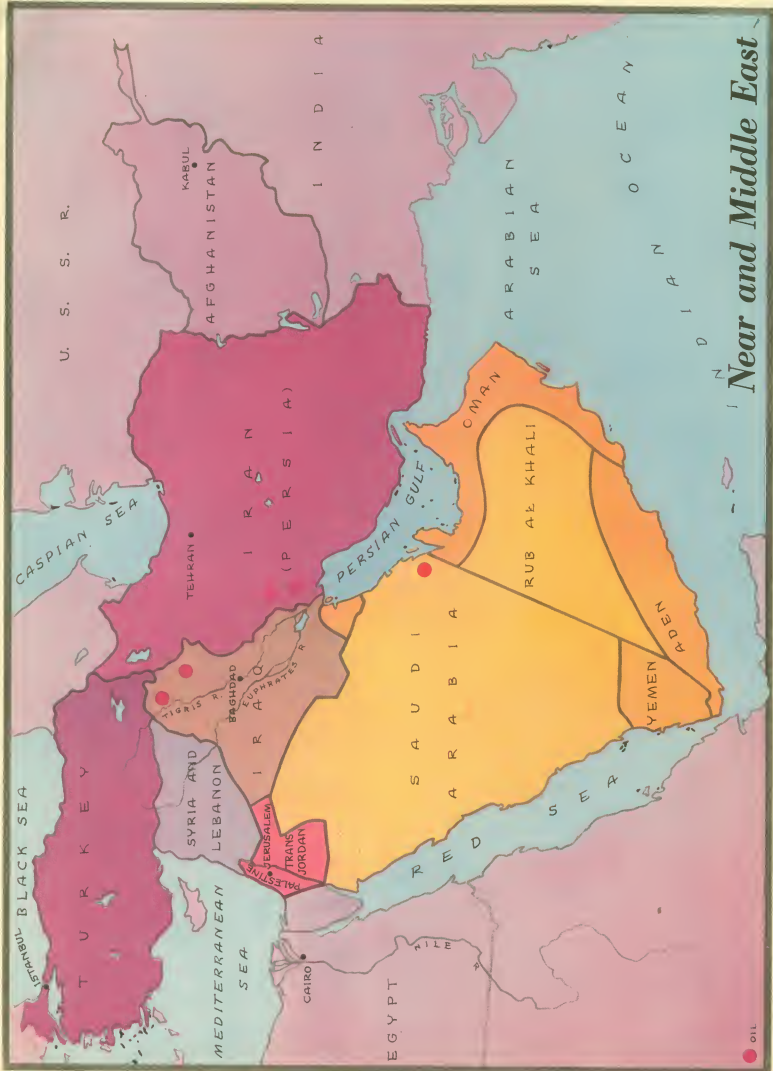
summers and moist, cool winters were ideal for people unequipped with mechanical contrivances. The lands produced cotton, wheat, sugar, citrus fruits, and olives. It was found that these could be produced more abundantly elsewhere. And, though there is petroleum in the Balkans and the Near East, the Mediterranean shore lacked the coal and iron necessary to a great industrial civilization. The opening of the Suez Canal brought a great revival of water traffic, but it was chiefly significant only in that it made the Mediterranean a more important part of the great water highway connecting America, Europe, and Asia.

Rumania, Yugoslavia, Bulgaria, Greece, Albania, and European Turkey are comparable topographically to the group of small Central American nations. The word Balkan, of Turkish origin, means mountain. The craggy nature of the region—which is about the size of Texas—has tended to cause small divisions into countries of extremely strong national feelings. They are clans on a large scale. No less than sixteen nationalities with five separate religions—Greek Orthodox, Catholic, Protestant, Moslem, Jewish—live here.

Even in the cities the people cling to ancient tribal customs and prejudices. In every street Europe and Asia exist side by side.

These factors, coupled with proximity to the passage between the Black Sea and the Mediterranean, have resulted in the Balkans becoming known as the powder keg of Europe. "Spring will see war in the Balkans," has long been a European saying. The fuse of World War I was lighted here when Archduke Ferdinand was murdered at Sarajevo. But that was only one of the many sparks that have served to set off explosions.

The chief industry is agriculture, practiced by the hardy people in a primitive fashion. The Albanians and Greeks produce olives, grapes, figs, almonds, and tobacco. Rumania grows sugar, grains, livestock, and is rich in oil. Yugoslavia produces lumber, livestock, and grain. The Bulgarians are mainly engaged in agriculture, as are the Turks. But there are great undeveloped riches in oil, coal, and waterpower. Labor costs are very low. Consequently the Balkans are extremely attractive to the modern conqueror.



Near and Middle East

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Near and Middle East

The bridge of land linking East and West is one of the least productive regions of the worlds; it forms part of the great tradewinds desert, of which the Sahara is also a part.

THE ROMANTIC names of dead cities recall this land's past glory. Here thrived Damascus and Babylon, Nineveh, Tyre, and Baghdad. The Near and Middle East includes Egypt, Palestine, Trans-Jordan, Syria, Iraq, Saudi Arabia, Yemen, and the small states of the Arabian Peninsula and the Persian Gulf. Americans call Iraq and Iran the Middle East; to the British, the Balkans and Turkey are the Near East, the rest the Middle East.

Southwestern Asia, a part of the great trade winds desert of which the Sahara is the largest area, is one of the least fertile regions of the world. The scanty population can barely raise enough to eat. The region is important for two reasons: it contains one of the great oil fields of the world, and it is the land bridge between Europe and the East.

The ancients constructed a complex system of irrigation canals to carry water from the Euphrates and Tigris Rivers. It is believed that Babylon fell because the water was diverted to other cities. The region along the west coast of the Mediterranean is the holy land of the Bible. It is also sacred to the Mohammedans. In

the Middle Ages it was a bloody battleground as the Christian crusaders fought to wrest the region from the infidels. The wars also served to keep open the trade routes to the East. Their control assured a supply of spices, so important before the days of refrigeration.

The area, including Turkey, Iran (Persia), and Iraq, was one of the most coveted of the weakly held parts of the world prior to World War I. Germany, Britain, France, and Russia all vied for control. France and England were the more successful after the war. Germany and Russia would like to have the territory; all desire the petroleum.

The oil fields lie on the border between Iraq and Iran and on the shore of the Persian Gulf. Iran is chiefly plateau land suitable for grazing and some cultivation. Many natives are expert weavers of rugs, but the industry is declining. The valleys of the Tigris and Euphrates Rivers in Iraq are fertile, though most of the country is arid and is inhabited by nomadic tribes.

Turkey is all that remains of the powerful Ottoman Empire. After the Balkan war of 1912-1913 and



The region of the Middle East, including Turkey and Iran (Persia), which, because of its oil, was one of the most coveted areas of the world before the first World War was at the same time one of the most weakly defended.

World War I, Turkey's territory was reduced and her tyrannical religious sway—the Sultan was head of the Mohammedan religion—over the minorities in Asia Minor was removed. A progressive government introduced the benefits of Western civilization; railway and other means of transportation were improved. Turkey's coasts are productive, but the interior is mainly high, dry plateaus. Most of the inhabitants are farmers or herders.

Afghanistan, east of Iran, is a mountainous region where warlike tribes live by grazing sheep and cultivation of patches of ground. Afghanistan is important as a buffer state between Russia and India.

In Palestine the old religious quarrels flare again. The Arabs resent the presence of Jews on what they consider sacred Mohammedan soil and they do not believe there is enough farm and grazing land to go around. But thousands of Jews from all parts of the world have settled in the old cradle of their race; they grow citrus fruits and olives, raise sheep and goats, and work the salt mines near the Dead Sea.

The large Arabian peninsula is mostly desert, where the wandering Arabs live much as did their ancestors. On the Red Sea are the famous cities of Mocha, once coffee center of the world, and Mecca, the holy city of the Mohammedans. The peninsula contains a number of independent states, including Yemen and Saudi Arabia.



Canadian Pacific Railway

Most of Syria's inhabitants are Arabs. The narrow coastal region is fertile and Syria has fine ports—Tyre, Tripoli, Beirut, and Alexandretta. Pipe lines running through Syria connect the Iran oil fields with the Mediterranean. As in Trans-Jordan, another Arab-inhabited territory on the south, winters in Syria are often surprisingly cold.

World War II brought a furious effort to increase Southwestern Asia's transportation facilities. A railroad from Turkey into Egypt was completed. A line from Basra, at the mouth of the Euphrates and Tigris Rivers, became of great use in carrying supplies to Russia. Motor highways were built. A chain of air bases was established. Thus the war brought the region nearer to the twentieth century.



South African Railways and Harbors

Africa

Climate and topography have both conspired to retard the development of much of Africa. Now, with the opening up of air travel and new roads, air-conditioning and scientific control of tropical diseases, a new era of progress may be looked for.

AFRICA is the least fortunate continent of the world. Nature passed it over in distributing resources, and man has done little to improve matters. The coast-line is exceedingly regular and as a result there are few good ports. Almost half the continent is desert. In regions of abundant rainfall the rivers hurtling down from the plateaus to the sea are mostly unnavigable. Great areas are unhealthy, and the tropical climate is not conducive to hard and sustained work.

Parts of Africa contained advanced civilizations in ancient times, but until comparatively recently the modern nations thought of the Dark Continent only as a source of slaves. Four centuries ago the Europeans began systematically to herd Negroes into ships like cattle for shipment throughout the world. By the end of the eighteenth century England alone had a fleet of 200 vessels. It is estimated that at the height of the trade more than two million Negroes were enslaved each year. Since the best specimens were chosen, the loss of manpower was another serious handicap to the continent.

A new interest was taken in Africa after an American journalist, Henry M. Stanley, penetrated the heart of the continent in the 1870's and published his book, "Through the Dark Continent." Belgium led the conquest, taking the Congo. France claimed the northern

equatorial regions. Britain secured large areas in the east and south. Spain, Portugal, Italy, and Germany got shares. The United States interested itself in Liberia because during the period of abolitionist agitation a colony for freed American slaves was established there.

The region of the north coast—Egypt, Libya, Tunis, Algeria, Morocco—is more closely linked to the life of the European Mediterranean countries than to the rest of Africa. The ancient civilizations of Rome and Greece were in some respects surpassed by those of Egypt and Carthage. In the northwest are high peaks which the Greeks, thinking them the highest in the world, called the Atlas Mountains. Tunis and Algeria, in this section, are fertile and contain rich deposits of minerals.

Below this coastal range is the Sahara Desert, greater in area than the United States. Part of it is sand, the rest barren rock. Winds moving from cooler to warmer regions draw off almost all the moisture. Camel caravans moving from oases to oases are the chief means of transportation—and 100,000 camels are required to carry freight equal to that which can





French Information Center



South African Railways and Harbors

From Algiers to Capetown the twentieth century has seen the exploitation of Africa and its resources carried on at a faster and faster pace. Its importance to Europe and the rest of the world continues to grow.

be moved in an average-sized merchant ship. The French have under construction a railroad between Algiers and Dakar. Dakar is very important to the United States because of its location on the bulge near South America.

Egypt is partly reclaimed from the desert by the Nile River, which each summer rises and floods its valley. The ancients devised a primitive system of irrigation to take advantage of the situation, and modern methods have made the practice more efficient. The British have constructed great dams to control the water supply and to improve the navigability of the stream. The dam at Aswan is one of the greatest in the world. Cotton of the long-staple variety is the region's chief crop.

The Sudan, below the desert, is occupied by primitive farmers and herdsman. The Congo and the Guinea Coast, below the Sudan, are largely jungle where natives live in primitive villages. Modern medicine is making progress in control of the fevers which have been rampant in the region. The plateau south of the Congo is more suited to white habitation. The eastern part of it is occupied by small farms and plantations; the western is used for grazing livestock.

The subtropical region at the southern tip of the continent is by far the most valuable. The farmers are mostly Europeans who grow sugar, livestock, fruit, and wheat. But it is the minerals which makes South

Africa the most important part of the continent. It is the world's leading producer of gold. Most of the gold is mined in the province of Transvaal, one of the four major provinces of the Union of South Africa. The ore is taken from a range of hills called the Witwatersand. The diamond mines of Kimberley and Pretoria are famous. More important deposits have been discovered, however, in the Belgian Congo and on the Guinea Coast. South Africa's coal deposits, while not large, are more important because of scarcity of the product elsewhere on the continent.

In a shifting world the future of any continent is difficult to predict, and Africa's case is made harder by its division between half a dozen contending powers. In the Nazi scheme of things the Dark Continent is scheduled to play the role of a great tropical plantation. Forced labor working at a standard of living even lower than that of the present is to produce riches for Europe with the Nazis, considering themselves a superior race, taking the best for themselves. In a world reorganized for the best welfare of the inhabitants of each region, Africa may have a relatively bright future. Air-conditioning is improving living conditions. Disease is being licked. Railroads were in the process of construction before the outbreak of war. The airplane has cut distances, and the development of air freight will solve many of the continent's transportation problems.







